

TOSHIBA

FILE NO. 2B0-9911

SERVICE MANUAL

CORDLESS TELEPHONE
FD-9839



PUBLISHED IN JAPAN, Dec., 1999

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SAFETY PRECAUTIONS

Before returning any models to the customer, a safety check of the entire instrument should be made. The service technician must be sure that no protective device built into the instrument by the manufacture has become defective or inadvertently degraded during servicing.

1.WARNING:

Alterations of the design or circuitry of these models should not be made.

Any design changes or additions such as, but not limited to, circuit modifications, auxiliary speaker jacks, switches, grounding, active or passive circuitry, etc. may alter the safety characteristics of these models and potentially create a hazardous situation for the user.

Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.

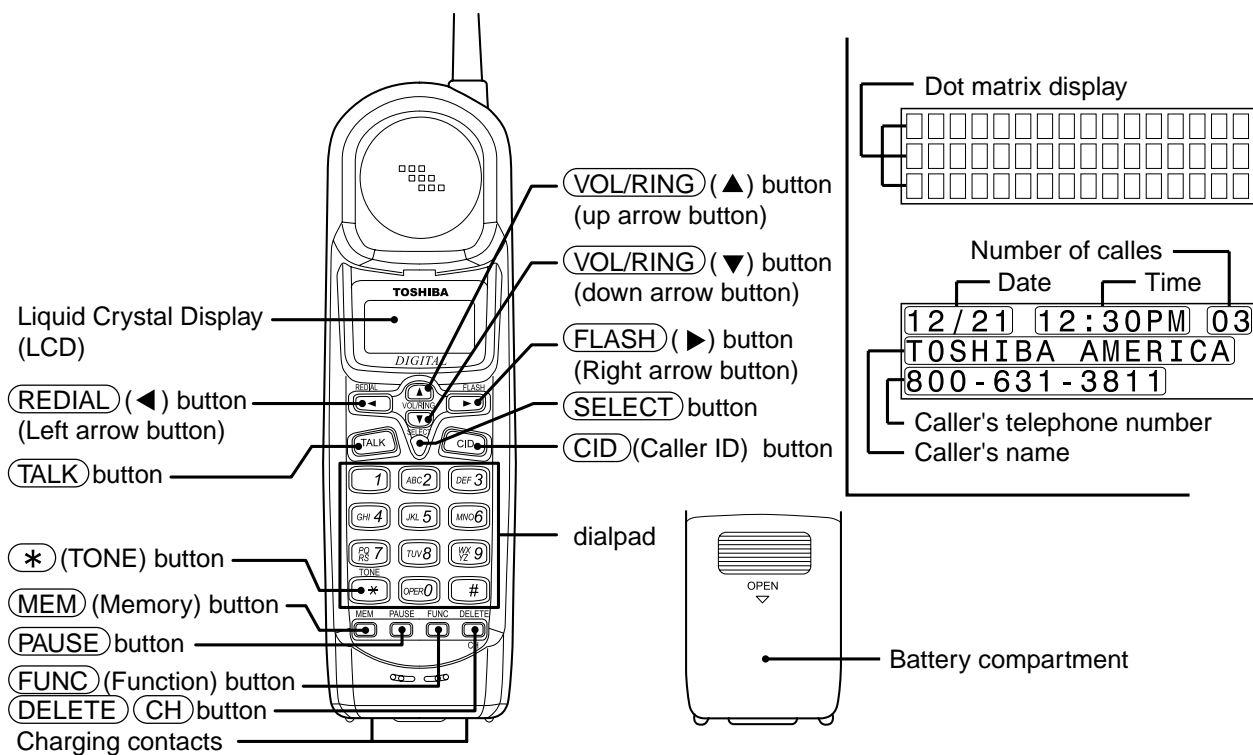
2.PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by a ⚠ in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

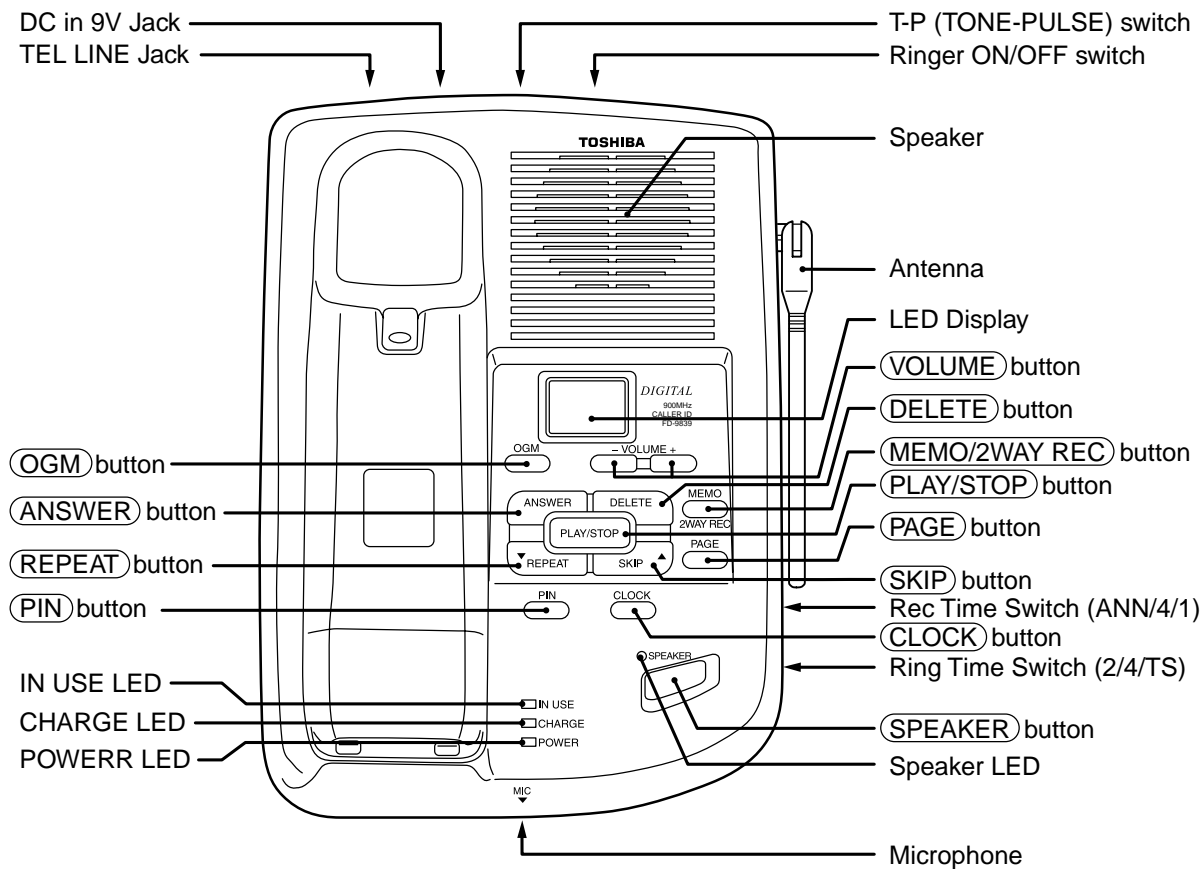
OPERATING CONTROLS

HANDSET CONTROLS AND FUNCTIONS

LCD



BASE UNIT CONTROLS AND FUNCTIONS

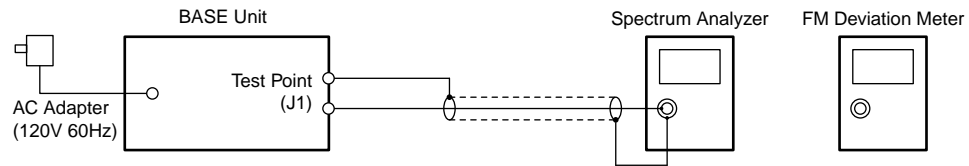


ALIGNMENT PROCEDURE

Base Unit

Transmitter Section

Connections



Preset

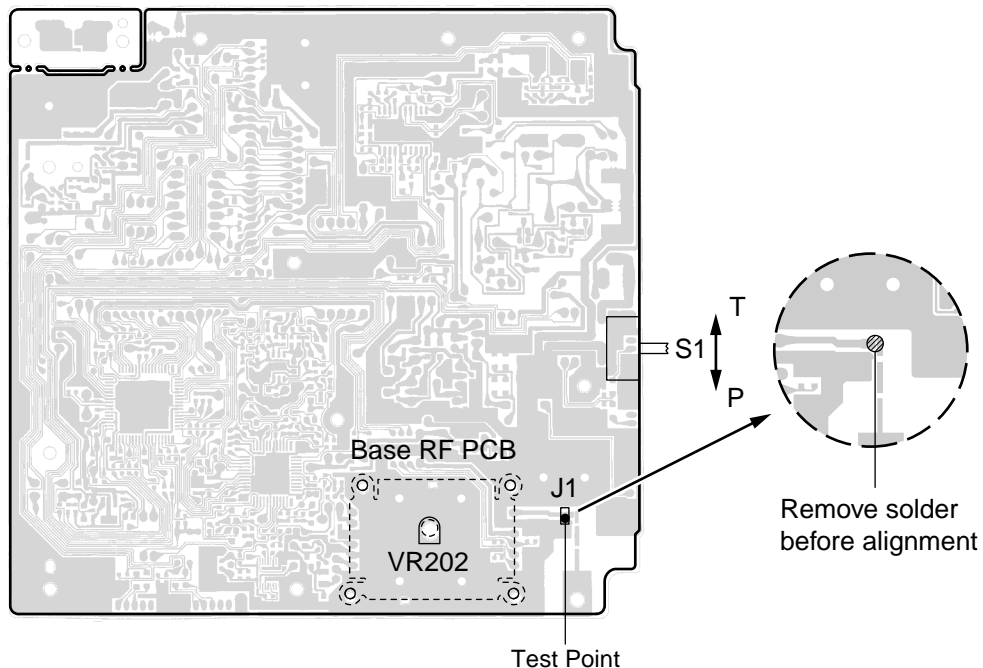
- Remove the solder on the pattern (refer to the illust. below).
- Set the "TONE / PULSE" switch to PULSE.
- Connect the AC adapter to the base unit while pressing the "PAGE" key, and keep pressing it continuously for approximate 2 seconds.
- Release the "PAGE" key when entering TEST mode 1 with CHARGE LED lighting.

Alignment Procedure

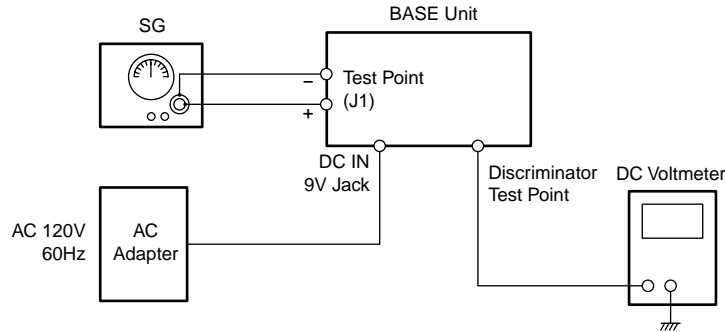
step	Adjustment	Remarks
1	VR202 (TX Power)	Connect the Spectrum Analyzer to test point (J1). Adjust VR202 so that the power instructions of the Spectrum analyzer reaches -6.0dBm. Then confirm the frequency is 926.295415 MHz.
2	—	Press the "PAGE" key twice and connect the FM Deviation Meter to test point J1. Confirm the deviation is 23 ~ 46 kHz.

Alignment Point Location on Base Main PCB and Base RF PCB

Base Main PCB



Receiver Section Connections



Preset

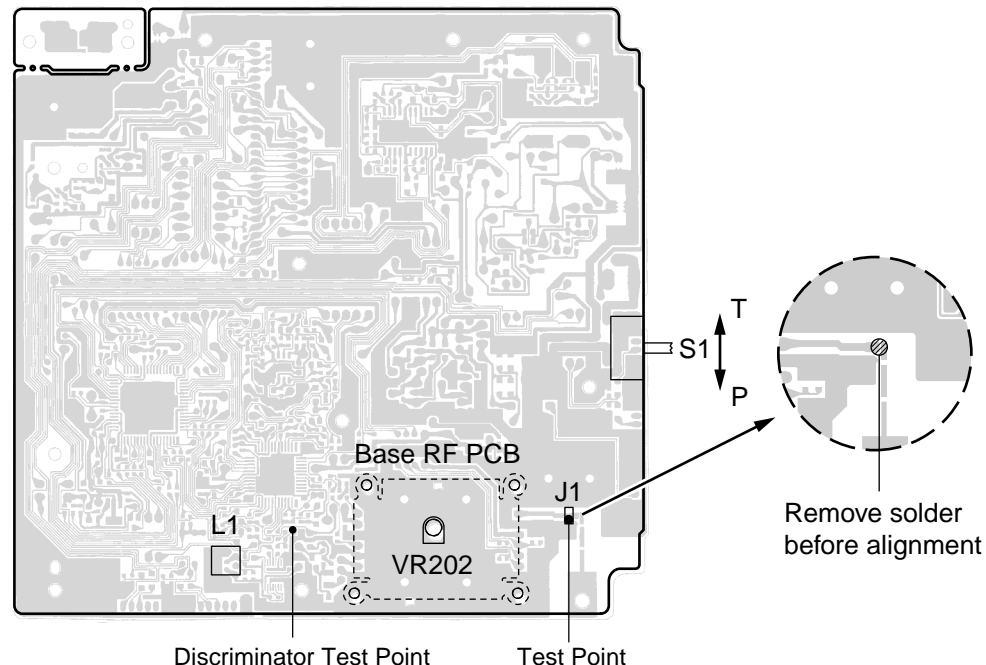
- Remove the solder on the pattern (refer to the illust. below).
- Set the "TONE/PULSE" switch to PULSE.
- Connect the AC adapter to the base unit while pressing the "PAGE" key, and keep pressing it continuously for approximate 2 seconds.
- Release the "PAGE" key when entering TEST mode 1 with CHARGE LED lighting.

Alignment Procedure

step	Preset to	Adjustment	Remarks
1	SG: 1mV No modulation	L1 (Discriminator Voltage)	Press the "PAGE" key for 3 times to enter the TEST Mode 4. Connect the RF Signal Generator to the test point (J1) on the Base MAIN PCB. Make sure that the frequency is 903.417756 MHz. Connect the DC Voltmeter to the Discriminator test point. Adjust L1 to indicate DC 0.90 V.

Alignment Point Location on Base Main PCB and Base RF PCB

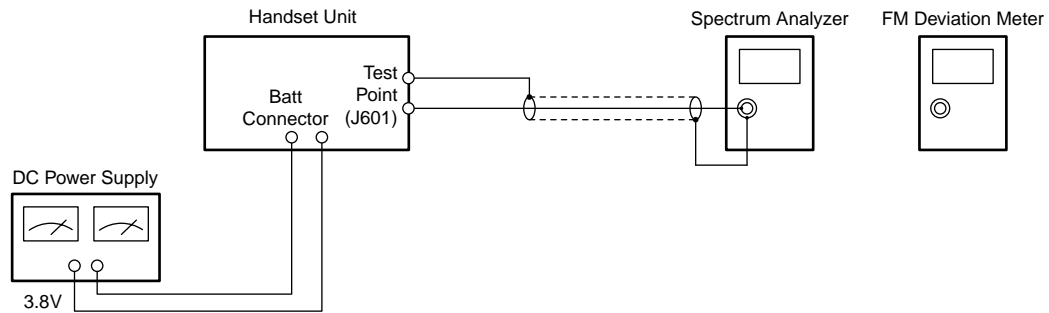
Base Main PCB



Handset Unit

Transmitter Section

Connection



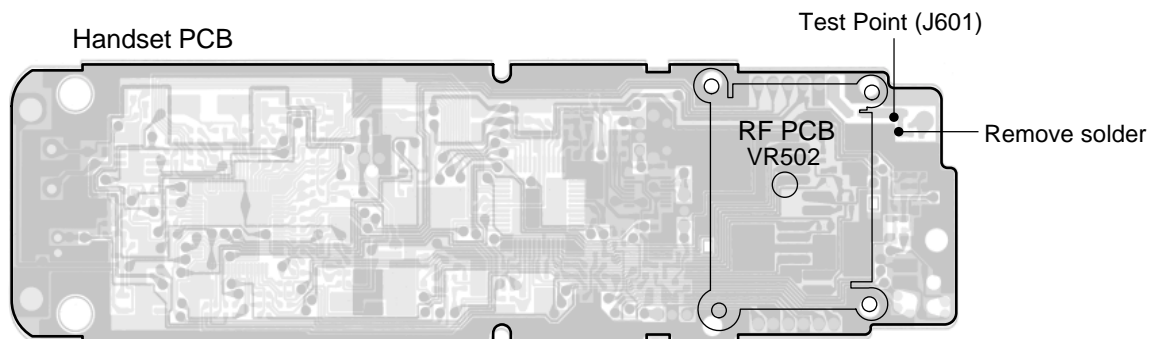
Preset

- Remove the solder on the pattern (refer to the illust. below).
- Connect DC power supply to battery connector on the handset unit.
- Turn the DC power supply On while pressing “*” and “#” keys, and keep pressing the keys continuously for approximate 2 seconds.
- Release keys when entering TEST mode 1 with beep.

Alignment Procedure

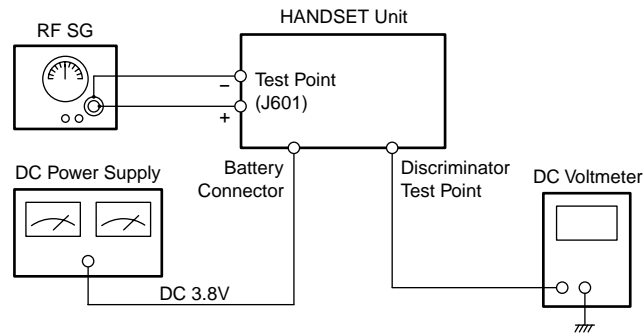
step	Adjustment	Remarks
1	VR502	Connect the Spectrum Analyzer to test point (J601). Adjust VR502 so that the power instructions of the Spectrum analyzer reaches -4.0 dBm. Then confirm the frequency is 903.617561 MHz.
2	—	Press the “3” key and connect the FM Deviation Meter to test point (J601). Confirm the deviation is 23 ~ 46 kHz.

Alignment Point Location on Handset Main PCB and Handset RF PCB



Receiver Section

Connections



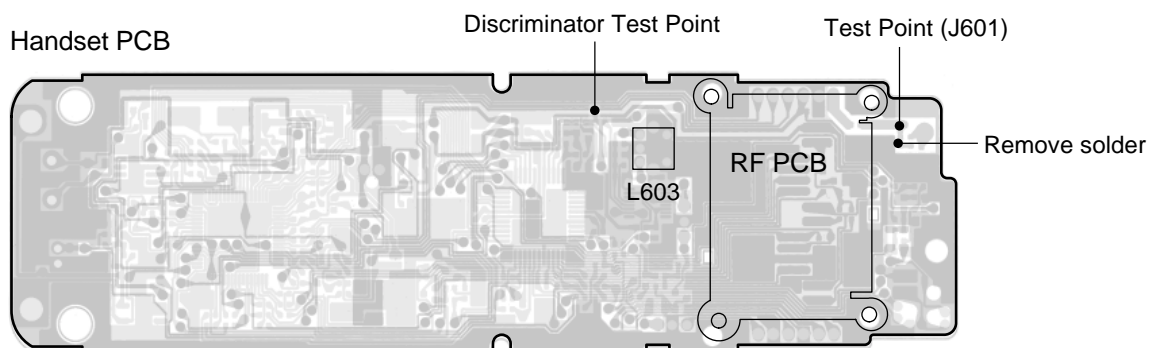
Preset

- 1) Remove the solder on the pattern (refer to the illust. below).
- 2) Connect DC power supply to battery connector on the handset unit.
- 3) Turn the DC power supply ON while pressing “*” and “#” keys, and keep pressing the keys continuously for approximate 2 seconds.
- 4) Release keys when entering TEST mode 1 with beep.

Alignment Procedure

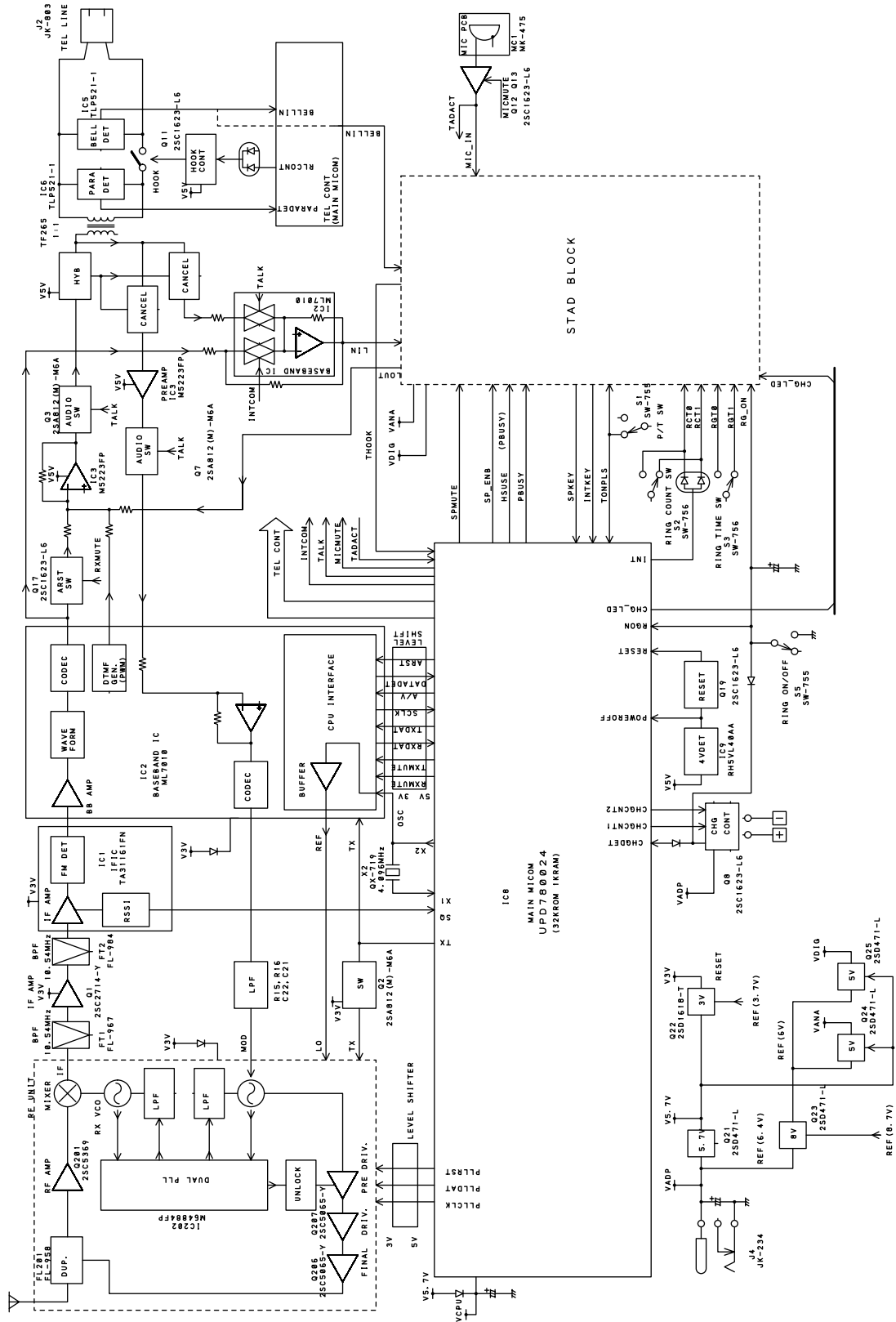
step	Preset to	Adjustment	Remarks
1	SG: 1mV No modulation	L603 (Discriminator Voltage)	Press the “4” key to enter the TEST Mode 4. Connect the RF Signal Generator to the test point (J601) on the handset MAIN PCB. Make sure that the frequency is 926.495220 MHz. Connect the DC Voltmeter to the Discriminator test point. Adjust L603 to indicate DC 0.90 V.

Alignment Point Location on Handset Main PCB and Handset RF PCB

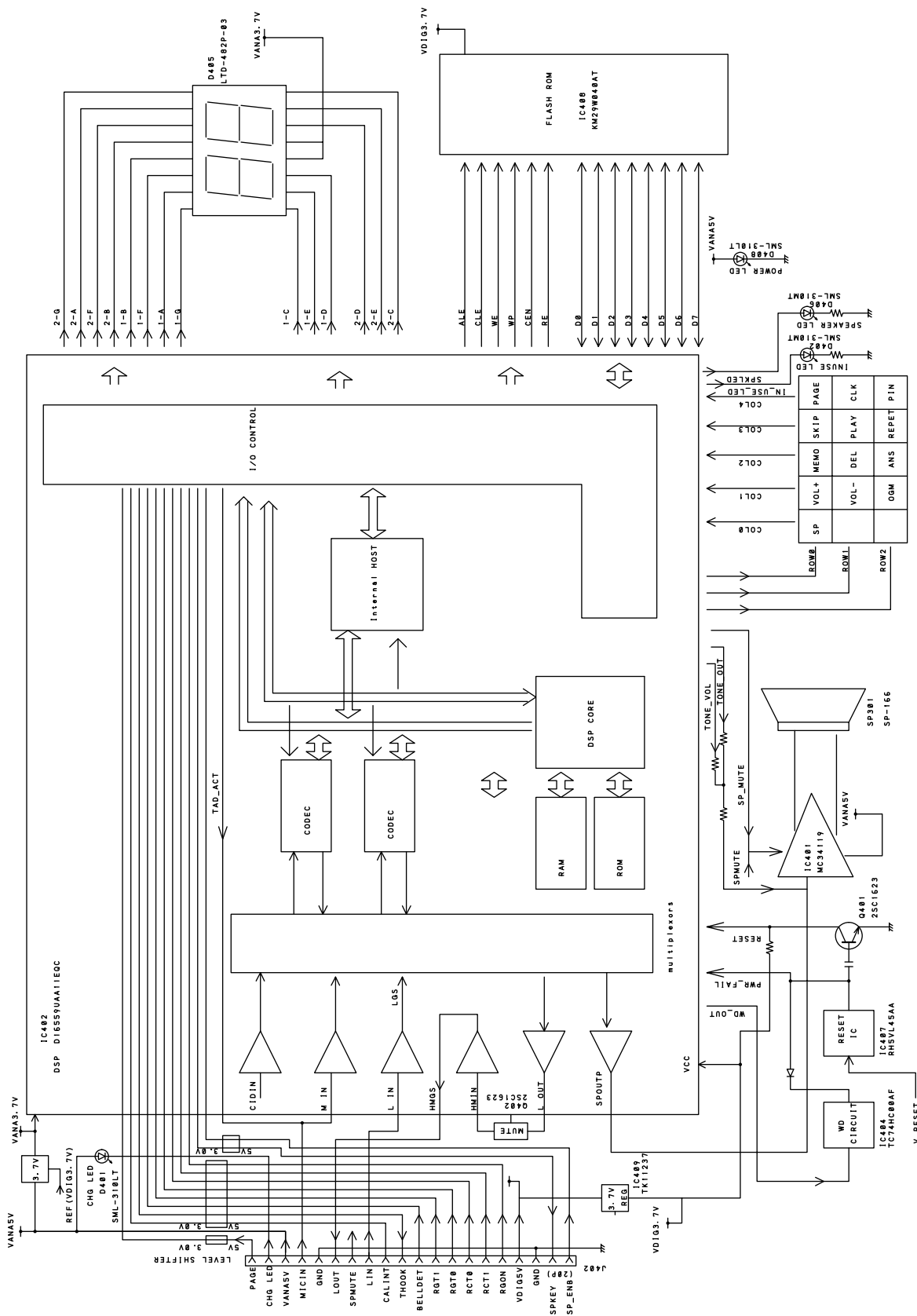


BLOCK DIAGRAMS

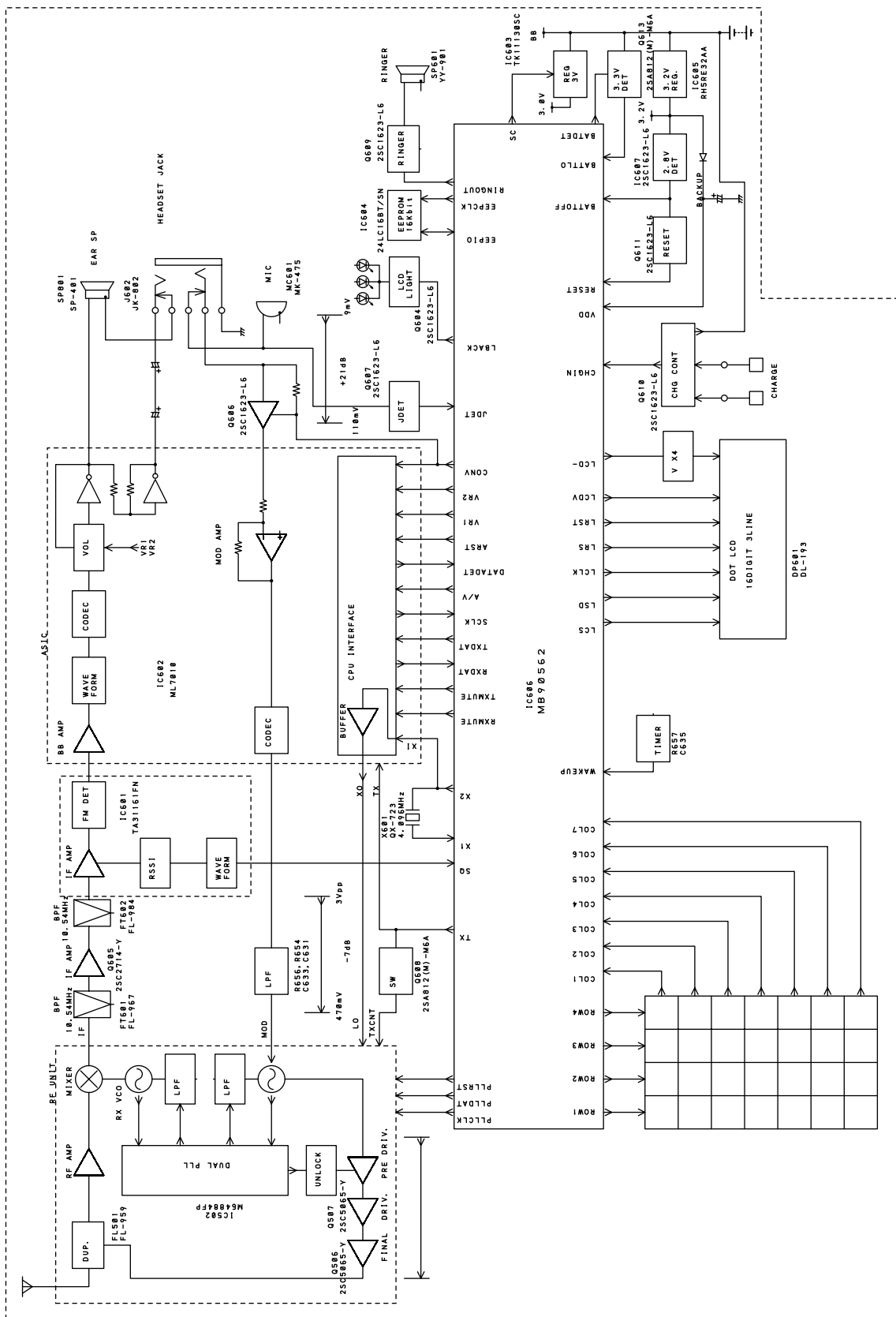
Base Unit, Main



Base Unit, Key

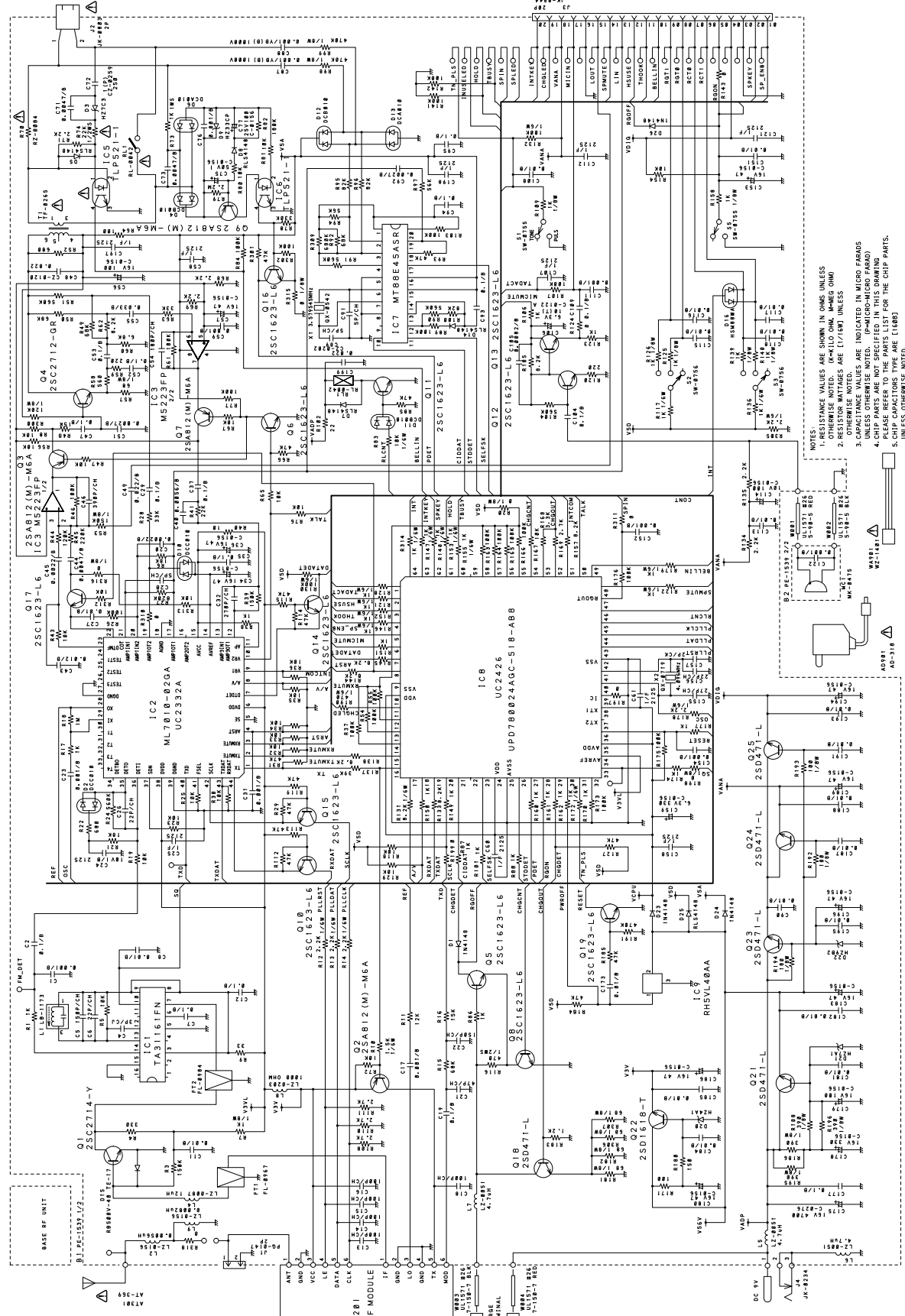


Handset

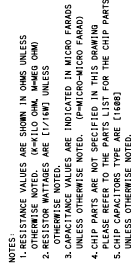


SCHEMATIC DIAGRAMS

Base Unit, Main



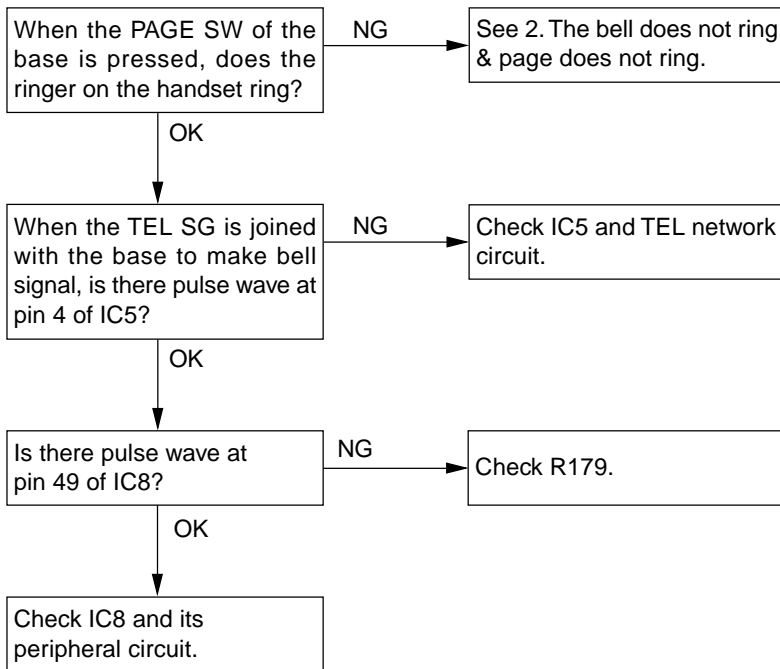
B401 PE-1587



[illegible]

TROUBLESHOOTING HINTS

1. The bell does not ring.



BASE UNIT

If you want to reset the unit to the factory settings

You can cancel the OGM, PIN, and the clock settings by the following process.

- 1) Disconnect the AC adaptor and telephone line cord from the base. Keep the AC adaptor connected to the wall outlet. Make sure that the telephone line cord remains disconnected during this procedure.
- 2) While pressing the DELETE button, plug the AC power adaptor into the base. Keep pressing the DELETE button for more than 4 seconds.

A beep sounds and “P” blinks in the LED display.

To resume using the unit, connect the telephone line cord and place the handset on the base.

Note:

If you turn on the unit again, “P” may flash.

HANDSET

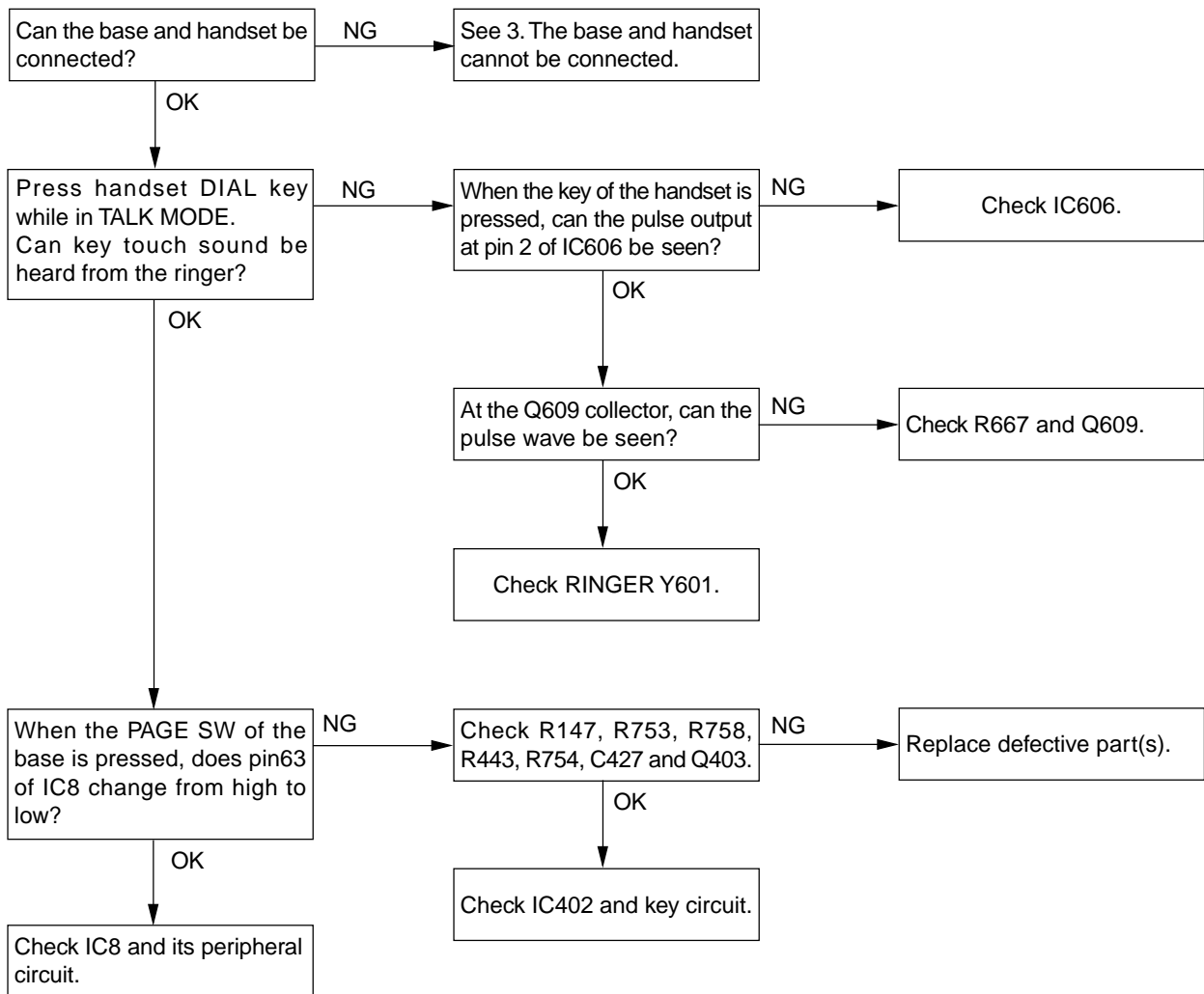
Deletion of the Caller ID memory

To delete the Caller ID memory in the EEPROM, proceed with the following process:

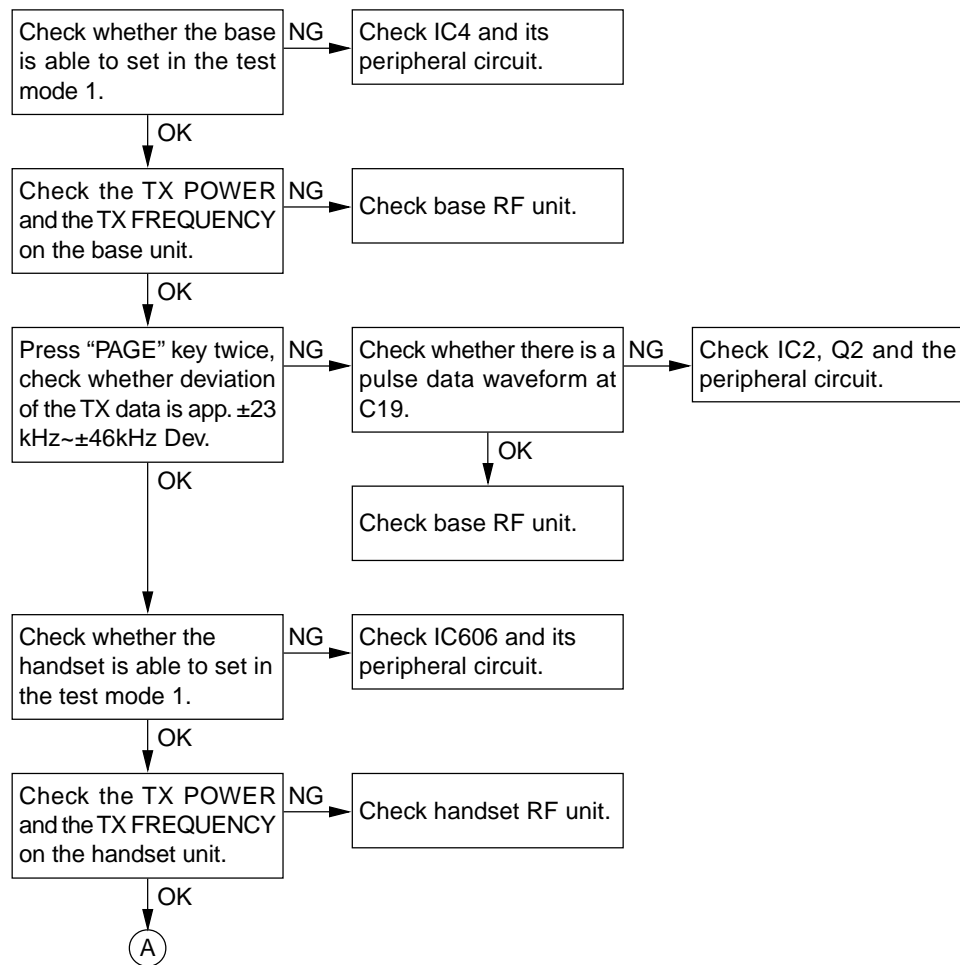
- 1) Connect the battery with pressing **(*)** and **(#)** buttons, and keep pressing the buttons continuously for approximate 2 seconds.
- 2) Release buttons when entering TEST mode with beep.
- 3) Press **(CID)** button.
- 4) A confirmation beep will sound after about 8 seconds, then the data for caller ID is deleted.

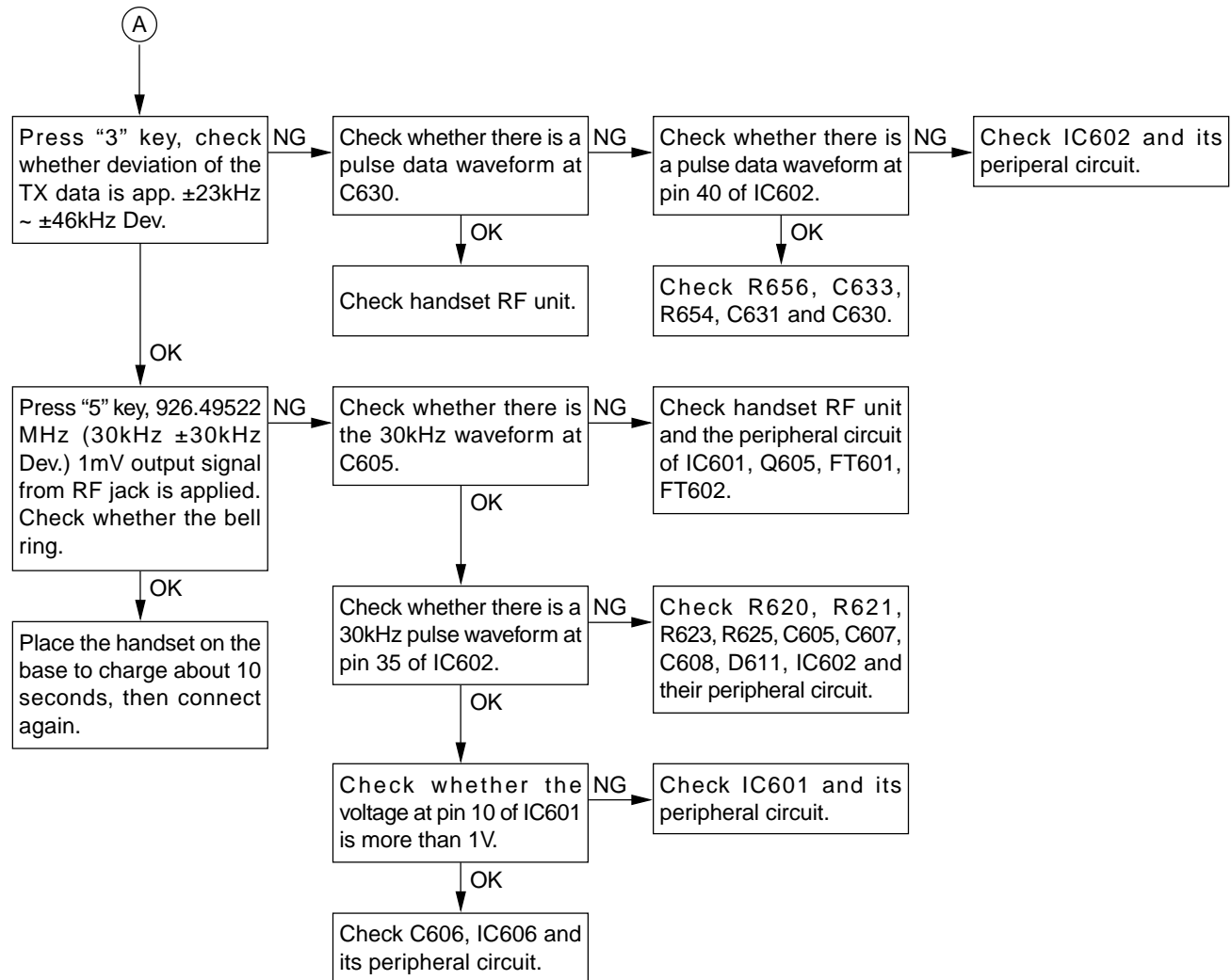
(Note: Do not disconnect the battery until you hear the confirmation beep, otherwise the data may not be completely deleted.)

2. The bell does not ring & page does not ring.

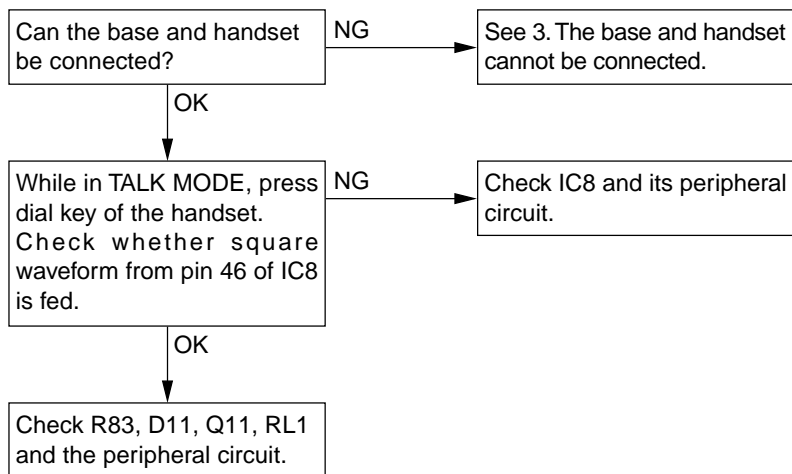


3. The base and handset cannot be connected.

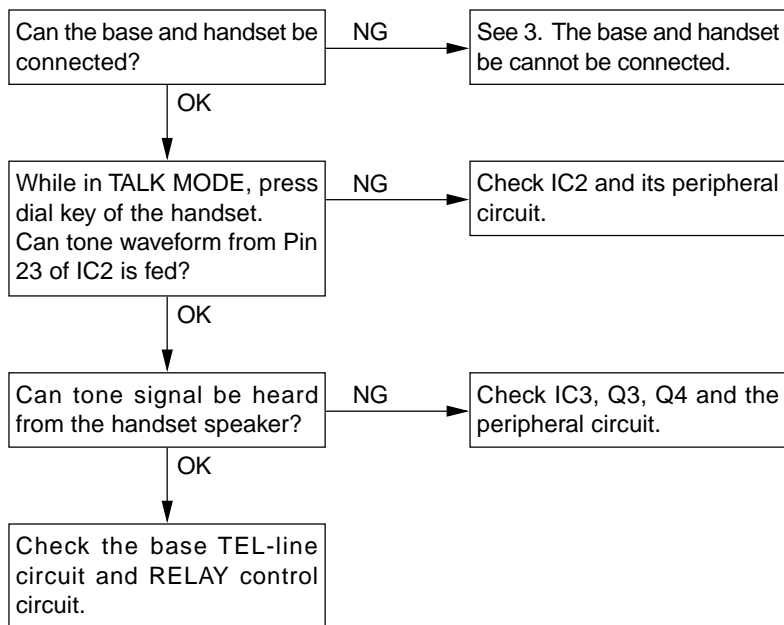




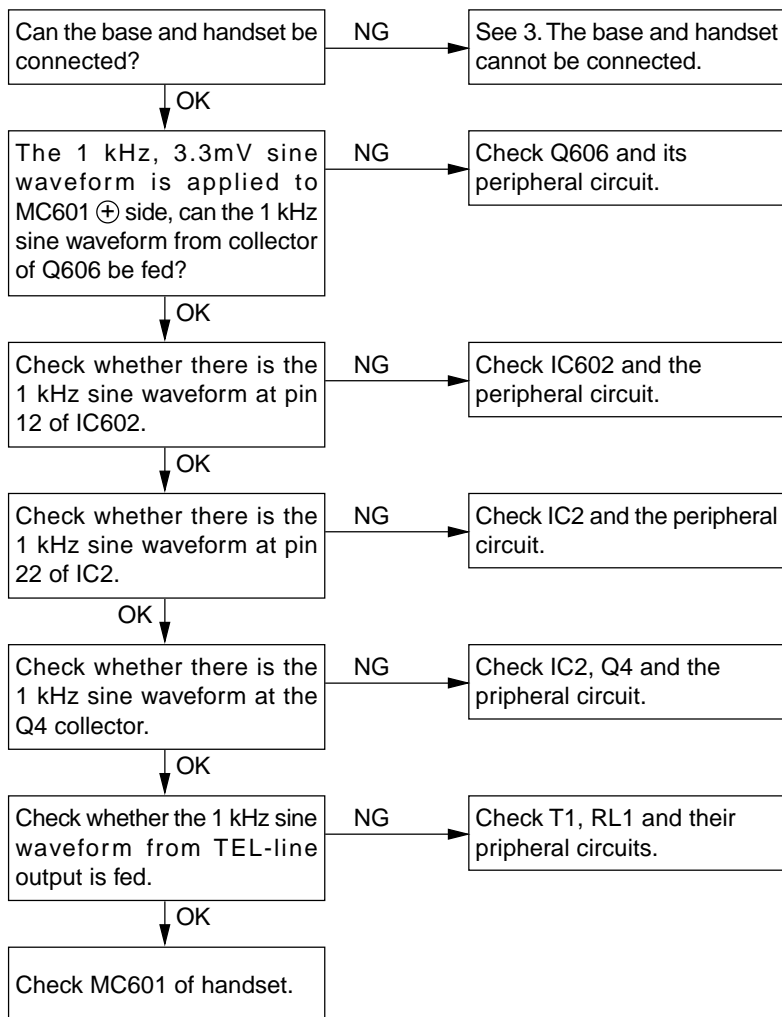
4. Cannot make a phone call (pulse).



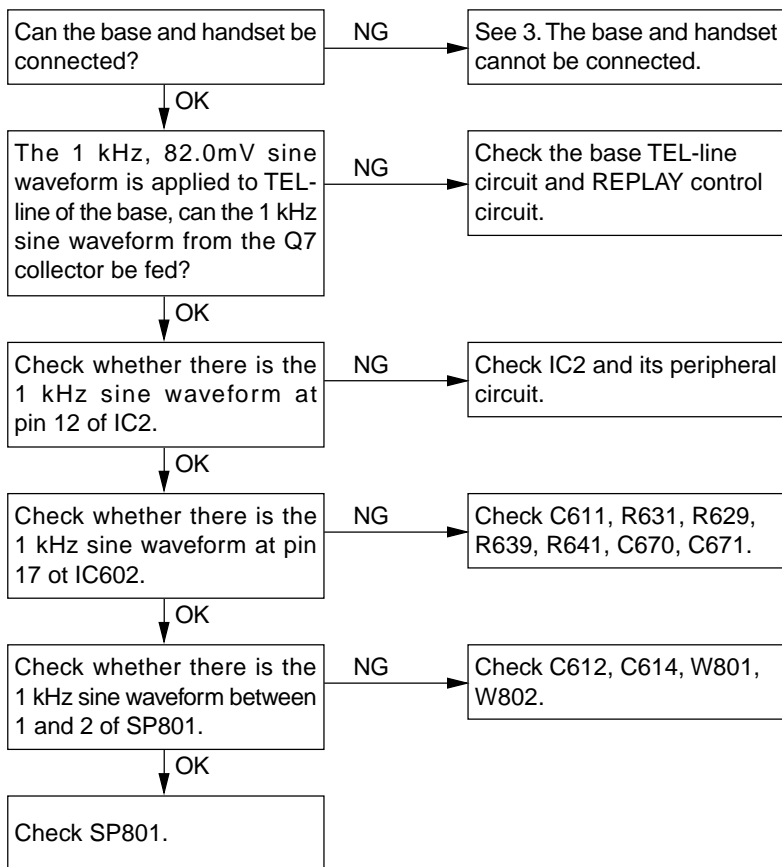
5. Cannot make a phone call (tone).



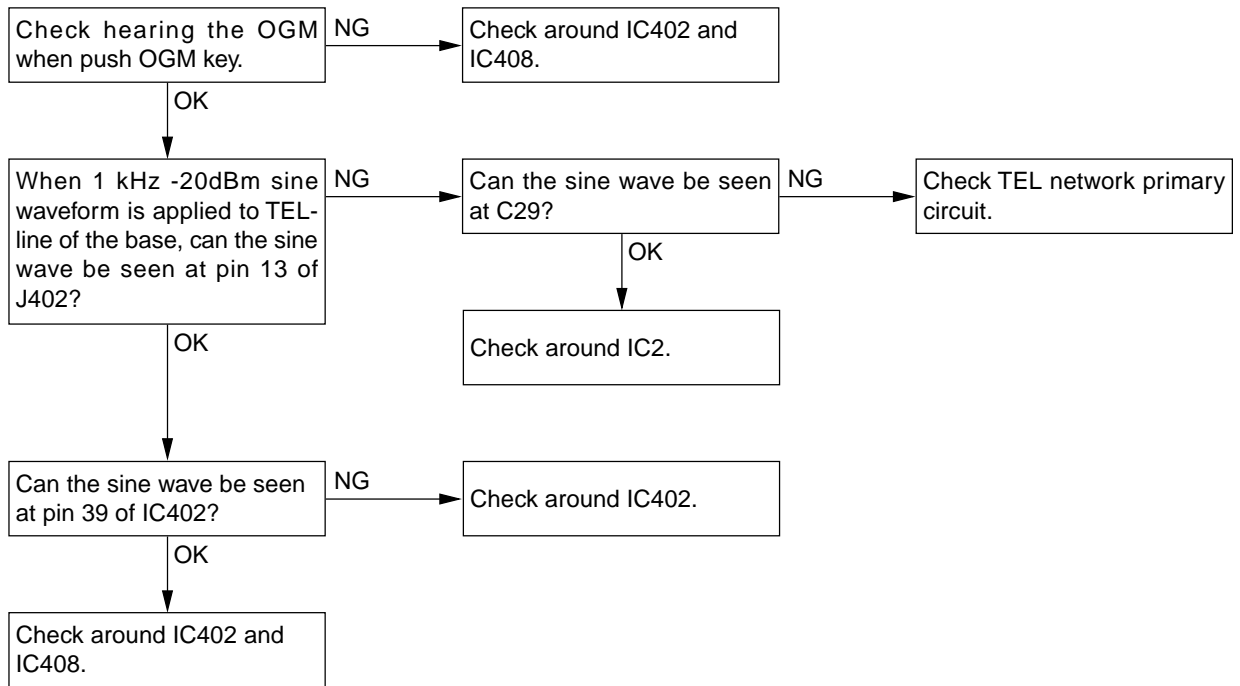
6. Voice cannot be transmitted to other party (outgoing call).



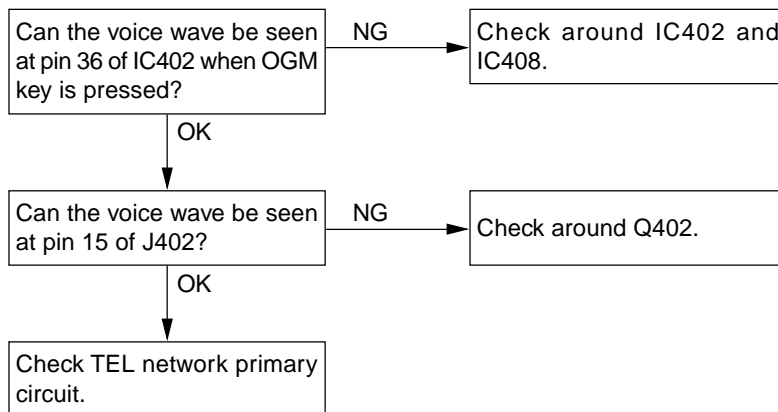
7. The voice of the caller cannot be heard (incoming call).



8. The voice of the caller cannot be recorded.



9. Outgoing message cannot be transmitted to other party.



IC AND TRANSISTOR VOLTAGE CHART

Base Unit

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC1	1	2.8	2.8	
	2	2.8	2.8	
	3	2.8	2.8	
	4	1.4	1.4	
	5	0.0	0.0	
	6	2.8	2.8	
	7	2.8	2.8	
	8	2.8	2.8	
	9	2.8	2.8	
	10	0.4	2.2	
	11	1.9	1.9	Sine wave
	12	2.0	1.9	Sine wave
	13	2.8	2.8	
	14	0.9	1.0	Random
	15	0.0	0.0	
	16	1.0	1.0	
IC2	1	2.8	0.0	
	2	0.0	2.8	
	3	0.0	2.8	
	4	2.8	2.8	
	5	0.0	0.0	
	6	3.0	3.0	
	7	0.0	3.0	
	8	0.0	2.8	
	9	0.0	0.0	
	10	0.0	2.8	
	11	3.0	2.9	
	12	1.4	1.4	
	13	1.4	1.4	
	14	1.4	1.4	
	15	3.0	2.9	
	16	1.4	1.4	
	17	1.4	1.4	
	18	0.0	0.0	
	19	1.2	1.4	
	20	1.4	1.4	
	21	1.4	1.4	
	22	1.4	1.4	
	23	0.0	0.0	
	24	0.0	0.0	
	25	0.0	0.0	
	26	0.0	0.0	
	27	0.0	0.0	
	28	1.3	1.3	Sine wave

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC2	29	1.2	1.2	Sine wave
	30	3.0	3.0	
	31	3.0	3.0	
	32	3.0	3.0	
	33	3.0	3.0	
	34	1.5	1.5	Pulse
	35	1.5	1.5	Random
	36	1.5	1.5	Random
	37	0.0	0.0	
	38	3.0	3.0	
	39	0.0	0.0	
	40	0.0	1.4	Pulse
	41	0.0	0.0	
	42	2.6	2.6	Pulse
	43	0.3	0.5	Pulse
	44	0.0	0.6	Pulse
IC3	1	2.6	2.5	
	2	2.6	2.5	
	3	2.6	2.5	
	4	0.0	0.0	
	5	2.6	2.5	
	6	2.5	2.5	
	7	2.5	2.5	
	8	5.1	5.1	
IC5	1	0.0	0.0	
	2	0.0	0.0	
	3	0.0	0.0	
	4	4.6	4.6	
IC6	1	0.0	0.0	
	2	0.0	0.0	
	3	0.0	0.0	
	4	0.5	0.5	
IC7	1	2.5	2.5	
	2	2.6	2.5	
	3	2.6	2.5	
	4	2.6	2.5	
	5	0.0	0.0	
	6	2.4	2.4	Sine wave
	7	2.7	2.7	Sine wave
	8	0.0	0.0	
	9	5.1	5.1	
	10	5.1	5.1	
	11	5.1	5.1	
	12	0.0	0.0	

Unit[V]				
Ref. No.	PIN	STBY	TALK	NOTE
IC7	13	0.0	0.0	
	14	5.1	5.1	
	15	5.1	5.1	
	16	5.1	5.1	
	17	0.0	0.0	
	18	2.6	2.6	
	19	2.6	2.6	
	20	2.5	2.5	
IC8	1	0.8	0.8	
	2	0.0	5.0	
	3	0.0	0.0	
	4	0.0	0.0	
	5	5.1	0.0	
	6	0.0	5.1	
	7	5.1	5.1	
	8	0.0	5.1	
	9	0.0	0.0	
	10	5.1	5.1	
	11	3.9	3.9	
	12	5.2	5.2	
	13	5.1	5.1	
	14	5.1	0.0	
	15	0.0	5.1	
	16	5.1	0.0	
	17	0.0	5.1	
	18	0.0	1.0	Random
	19	0.4	1.0	Random
	20	4.6	4.5	Pulse
	21	5.1	5.1	
	22	5.1	5.1	
	23	0.0	0.0	
	24	5.1	5.1	
	25	0.0	0.0	
	26	5.1	5.1	
	27	0.0	0.0	
	28	4.2	4.2	
	29	5.2	5.2	
	30	5.8	5.7	
	31	5.1	5.1	
	32	0.0	0.0	
	33	0.4	2.2	
	34	3.0	3.0	
	35	5.1	5.1	
	36	5.1	5.0	

Unit[V]				
Ref. No.	PIN	STBY	TALK	NOTE
IC8	37	0.0	0.0	
	38	5.1	5.1	
	39	0.0	0.0	
	40	3.1	3.1	Sine wave
	41	2.7	2.7	Sine wave
	42	0.0	0.0	
	43	5.0	5.0	Random
	44	5.0	5.0	Random
	45	0.0	0.0	Random
	46	0.0	5.0	
	47	0.0	0.0	
	48	2.6	2.6	
	49	5.1	5.1	
	50	0.0	5.0	
	51	0.0	0.0	
	52	5.0	4.9	
	53	5.1	5.0	
	54	5.1	5.0	
	55	5.2	5.1	
	56	5.2	5.1	
	57	5.2	5.1	
	58	5.1	5.1	
	59	0.0	5.0	
	60	0.0	0.0	
	61	0.0	0.0	
	62	0.0	0.0	
	63	0.0	0.0	
	64	0.0	0.0	
IC9	1	5.8	5.8	
	2	5.8	5.8	
	3	0.0	0.0	
IC401	1	2.6	2.6	
	2	2.2	2.2	
	3	2.2	2.2	
	4	2.2	2.2	
	5	2.2	2.2	
	6	5.2	5.2	
	7	0.0	0.0	
	8	2.1	2.1	
IC402	1	0.0	0.0	
	2	0.0	0.0	
	3	0.0	0.0	
	4	3.1	3.1	
	5	0.0	0.0	

Unit[V]

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC402	6	0.0	3.0	
	7	0.0	0.0	
	8	0.0	0.0	
	9	2.6	2.6	
	10	0.0	0.0	
	11	0.0	0.0	
	12	3.7	3.7	
	13	0.0	0.0	
	14	2.2	2.2	
	15	2.2	2.2	
	16	3.8	3.8	
	17	3.8	3.8	
	18	3.8	3.8	
	19	3.8	3.8	
	20	3.8	3.8	
	21	3.8	3.8	
	22	3.8	3.8	
	23	3.8	3.8	
	24	3.8	3.8	
	25	3.8	3.8	
	26	3.8	3.8	
	27	2.2	2.2	
	28	0.0	0.0	
	29	2.0	2.0	Pulse
	30	0.0	0.0	
	31	0.0	0.0	
	32	1.6	1.5	
	33	1.5	1.5	
	34	3.7	3.7	
	35	1.6	1.5	
	36	1.6	1.5	
	37	3.7	3.7	
	38	1.6	1.5	
	39	1.6	1.5	
	40	0.0	0.0	
	41	0.0	0.0	
	42	0.0	0.0	
	43	3.7	2.7	
	44	1.6	1.5	
	45	1.6	1.5	
	46	0.0	0.0	
	47	1.6	1.5	
	48	1.6	1.5	
	49	1.6	1.5	

Ref. No.	PIN	STBY	TALK	NOTE
IC402	50	0.0	0.0	
	51	3.7	3.7	
	52	3.7	3.7	
	53	0.5	0.5	Sine wave
	54	0.6	0.6	Sine wave
	55	0.0	0.0	
	56	3.7	3.7	
	57	3.7	3.7	
	58	3.7	3.7	
	59	3.7	3.7	
	60	2.2	0.0	
	61	0.0	0.0	
	62	0.0	0.0	
	63	3.7	3.7	
	64	3.7	3.7	
	65	0.0	0.0	
	66	3.7	3.7	
	67	3.7	3.7	
	68	3.7	3.7	
	69	3.7	3.7	
	70	3.7	3.7	
	71	0.0	0.0	
	72	0.0	0.0	
	73	0.0	0.0	
	74	0.0	0.0	
	75	3.7	3.7	
	76	0.0	0.0	
	77	0.0	0.0	
	78	0.0	3.3	
	79	0.0	0.0	
	80	0.0	0.0	
	81	3.7	3.7	
	82	0.0	0.0	
	83	0.0	0.0	
	84	0.0	0.0	
	85	0.0	0.0	
	86	0.0	0.0	
	87	0.0	0.0	
	88	0.0	0.0	
	89	0.0	0.0	
	90	0.0	0.0	
	91	0.0	0.0	
	92	0.0	0.0	
	93	3.7	3.7	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC402	94	3.7	3.7	
	95	3.7	3.7	
	96	0.0	0.0	
	97	0.0	0.0	
	98	0.0	0.0	
	99	3.2	3.2	
	100	0.0	0.0	
IC404	1	3.7	3.7	
	2	3.7	3.7	
	3	0.0	0.0	
	4	0.0	0.0	
	5	0.0	0.0	
	6	3.7	3.7	
	7	0.0	0.0	
	8	1.9	1.9	Pulse
	9	1.2	1.2	Pulse
	10	1.2	1.2	Pulse
	11	3.7	3.7	
	12	0.4	0.4	
	13	0.4	0.4	
	14	3.7	3.7	
IC407	1	3.7	3.7	
	2	5.2	5.2	
	3	0.0	0.0	
IC408	1	0.0	0.0	
	2	0.0	0.0	
	3	0.0	0.0	
	4	3.6	3.6	
	5	3.5	3.5	
	6	0.0	0.0	
	7	0.0	0.0	
	8	0.0	0.0	
	9	0.0	0.0	
	10	0.0	0.0	
	11	0.0	0.0	
	12	0.0	0.0	
	13	0.0	0.0	
	14	0.0	0.0	
	15	0.0	0.0	
	16	0.0	0.0	
	17	0.0	0.0	
	18	0.0	0.0	
	19	0.0	0.0	
	20	0.0	0.0	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC408	21	3.7	3.7	
	22	0.1	0.1	
	23	0.0	0.0	
	24	0.1	0.1	
	25	0.1	0.1	
	26	0.0	0.0	
	27	0.0	0.0	
	28	0.0	0.0	
	29	0.0	0.0	
	30	0.0	0.0	
	31	0.0	0.0	
	32	0.0	0.0	
	33	0.0	0.0	
	34	0.0	0.0	
	35	0.0	0.0	
	36	0.0	0.0	
	37	0.0	0.0	
	38	3.6	3.6	
	39	3.7	3.7	
	40	3.7	3.7	
IC409	1	5.2	5.2	
	2	0.0	0.0	
	3	1.2	1.2	
	4	3.7	3.7	
	5	0.0	0.0	
	6	5.2	5.2	
Q1	B	0.7	0.7	
	E	0.0	0.0	
	C	1.7	1.7	
Q2	B	4.8	2.3	
	E	3.0	3.0	
	C	0.0	2.9	
Q3	B	5.1	1.9	
	E	2.6	2.5	
	C	2.6	2.5	
Q4	B	1.2	1.2	
	E	0.5	0.5	
	C	4.1	4.1	
Q5	B	0.0	0.0	
	E	0.0	0.0	
	C	4.9	4.9	
Q6	B	0.0	0.6	
	E	0.0	0.0	
	C	5.1	0.0	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
Q7	B	5.1	1.9	
	E	2.6	2.5	
	C	2.6	2.5	
Q8	B	0.7	0.7	
	E	0.0	0.0	
	C	0.0	0.0	
Q9	B	0.0	0.0	
	E	0.0	0.0	
	C	0.0	0.0	
Q10	B	0.7	1.1	Random
	E	0.0	0.6	Random
	C	0.0	1.0	Random
Q11	B	0.0	0.7	
	E	0.0	0.0	
	C	8.5	0.0	
Q12	B	0.7	0.0	
	E	0.0	0.0	
	C	1.3	0.0	
Q13	B	1.3	0.0	
	E	0.7	0.0	
	C	4.1	0.0	
Q14	B	0.6	3.0	Random
	E	0.0	3.0	Random
	C	0.0	5.1	Random
Q15	B	2.7	2.7	Pulse
	E	2.7	2.6	Pulse
	C	4.5	4.5	Pulse
Q16	B	0.6	0.6	
	E	0.0	0.0	
	C	0.0	0.0	
Q17	B	0.0	2.1	
	E	1.4	1.4	
	C	1.4	1.4	
Q18	B	0.7	0.7	
	E	0.0	0.0	
	C	0.0	0.0	
Q19	B	0.0	0.0	
	E	0.0	0.0	
	C	5.1	5.0	
Q21	B	6.5	6.6	
	E	6.0	6.0	
	C	11.2	10.6	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
Q22	B	3.7	3.7	
	E	3.0	3.0	
	C	5.8	5.8	
Q23	B	8.5	8.0	
	E	7.9	7.3	
	C	8.6	8.0	
Q24	B	5.8	5.8	
	E	5.2	5.2	
	C	7.3	7.9	
Q25	B	5.8	5.8	
	E	5.2	5.2	
	C	7.9	7.3	
Q401	B	0.0	0.0	
	E	0.0	0.0	
	C	3.7	3.7	
Q402	B	2.2	0.4	
	E	1.6	1.6	
	C	1.6	1.5	
Q403	B	0.6	0.6	
	E	0.0	0.0	
	C	0.0	0.0	
Q404	B	4.3	4.3	
	E	3.7	3.7	
	C	5.2	5.2	
Q405	B	0.6	0.6	
	E	0.0	0.0	
	C	0.0	0.0	
Q406	B	0.6	0.6	
	E	0.0	0.0	
	C	0.0	0.0	
Q407	B	1.4	1.4	
	E	0.8	0.8	
	C	0.8	0.8	

Handset

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC601	1	OPEN	OPEN	
	2	OPEN	OPEN	
	3	0.0-2.8	2.8	Pulse
	4	OPEN	OPEN	
	5	GND	GND	
	6	0.0-2.8	2.8	Pulse
	7	0.0-2.8	2.8	Pulse
	8	0.0-2.8	2.8	Pulse
	9	0.0-2.8	2.8	Pulse
	10	0.0-0.4	2.2	Pulse
	11	OPEN	OPEN	
	12	0.0-2.0	2.2-2.6	Float Float
	13	0.0-2.8	0.0-2.0	Float Float
	14	0.4-1.0	0.4-1.2	Float Float
	15	GND	GND	
	16	OPEN	OPEN	
IC602	1	0.0-2.8	0.2	Pulse
	2	0.0	2.8	
	3	0.0	2.8	
	4	0.0-2.8	2.8	Pulse
	5	GND	GND	
	6	0.0-3.0	3.0	Pulse
	7	0.0	3.0	
	8	0.0	2.8	
	9	0.0	0.0	Vol Low Vol Low
	10	0.0-2.8	2.8	Pulse, Vol Low Vol Low
	11	0.0	2.8	
	12	0.0-0.8	1.4	Pulse
	13	0.0-0.8	1.4	
	14	0.0-0.8	1.4	
	15	0.0-3.0	3.0	Pulse
	16	0.0-0.6	1.4	Pulse
	17	0.0-0.6	1.4	Pulse
	18	GND	GND	
	19	0.0-0.6	1.4	Pulse
	20	0.0-0.6	1.4	Pulse
	21	0.0	0.0	
	22	0.0-0.6	1.4	Pulse
	23	OPEN	OPEN	
	24	OPEN	OPEN	
	25	OPEN	OPEN	
	26	OPEN	OPEN	
	27	GND	GND	
	28	0.0-3.0	0.0-3.2	Pulse Pulse

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC602	29		0.8-2.8	Pulse Pulse
	30	OPEN	OPEN	
	31	OPEN	OPEN	
	32	OPEN	OPEN	
	33	OPEN	OPEN	
	34	OPEN	OPEN	
	35	0.6-2.6	0.6-2.6	Float Float
	36	0.2-1.8	1.4-1.8	Float Float
	37	0.0-3.0	3.0	Pulse Pulse
	38	0.0-3.0	3.0	Pulse
	39	GND	GND	
	40	0.0	0.0-3.0	Pulse
	41	0.0	0.0	
	42	0.0-3.0	0.0-3.0	Pulse Pulse
	43	0.0-3.0	0.0-3.0	Pulse Pulse
	44	0.0-3.0	0.0-3.0	Pulse Pulse
IC603	1	0.0-2.8	0.0-2.8	Pulse Pulse
	2	GND	GND	
	3	0.0-1.2	1.2	
	4	0.0-3.0	3.0	Pulse
	5	3.8	3.8	
IC604	1	OPEN	OPEN	
	2	OPEN	OPEN	
	3	OPEN	OPEN	
	4	GND	GND	
	5	2.8	2.8	
	6	0.0-2.8	2.8	Pulse
	7	GND	GND	
	8	3.2	3.2	
IC605	1	GND	GND	
	2	3.8	3.8	
	3	3.2	3.2	
IC607	1	3.2	3.2	
	2	3.2	3.2	
	3	GND	GND	
IC606	1	0.0-0.2	2.8	Pulse
	2	0.0	0.0	
	3	OPEN	OPEN	
	4	0.0-0.8	2.1	Pulse
	5	0.0	0.0-2.6	Pulse
	6	0.0	0.0-3.0	Pulse
	7	0.0	0.0	
	8	0.0	0.0	
	9	0.0-2.8	2.8	Pulse

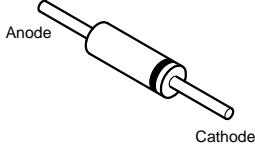
Unit[V]				
Ref. No.	PIN	STBY	TALK	NOTE
IC606	10	OPEN	OPEN	
	11	2.8-3.0	2.8	Pulse
	12	2.8-3.0	2.8	Pulse
	13	GND	GND	
	14	0.0	0.0	
	15	0.0-2.8	0.0-2.8	Pulse Pulse/Tone
	16	0.0-3.0	0.0-3.0	Pulse Pulse
	17	0.0	2.8	
	18	2.8-3.0	2.8	Pulse
	19	2.8-3.0	2.8	Pulse
	20	2.8-3.0	2.8	Pulse
	21	0.0	0.0	
	22	0.4-3.0	0.4-3.0	Sine wave Sine wave
	23	0.0-3.0	0.0-3.0	Sine wave Sine wave
	24	GND	GND	
	25	0.0	3.0	
	26	0.0-2.8	2.8	Pulse
	27	0.0	2.8	
	28	0.0	2.8	
	29	0.0-2.8	2.8	Pulse
	30	2.8-3.2	2.8	Pulse
	31	0.0-2.8	2.8	Pulse
	32	OPEN	OPEN	
	33	2.8-3.0	2.8	Pulse
	34	2.8-3.0	2.8	
	35	2.8-3.0	2.8	
	36	2.8-3.0	2.8	
	37	2.8-3.0	2.8	Pulse
	38	3.2	3.2	Charge Off
	39	1.0-2.9	2.9	Pulse
	40	0.0-2.9	2.9	Pulse, H/S Jack Off H/S Jack Off
	41	0.0	0.0	
	42	0.0	0.0	
	43	0.0	0.0	
	44	0.0	0.0	
	45	0.0	0.0	
	46	0.0	0.0	
	47	0.0	0.0	
	48	OPEN	OPEN	
	49	GND	GND	
	50	0.0	0.0	
	51	0.0-2.8	2.8	Pulse, Vol Low Vol Low
	52	0.0	0.0	Vol Low Vol Low
	53	0.0	3.0	

Unit[V]				
Ref. No.	PIN	STBY	TALK	NOTE
IC606	54	0.0-2.8	2.8	Pulse
	55	0.0	2.8	
	56	2.8-3.0	3.0	Pulse
	57	2.8-3.0	3.0	Pulse
	58	OPEN	OPEN	
	59	0.0	0.0-2.8	Pulse
	60	0.0-2.8	2.8	Pulse
	61	0.0	0.0-2.8	Pulse
	62	0.0	0.0-2.8	Pulse
	63	0.0	0.0-2.8	Pulse
Q604	B	0.0	0.0	BackLightOff BackLightOff
	E	GND	GND	
	C	2.4	2.4	BackLightOff BackLightOff
Q605	B	0.0-0.7	0.7	Pulse
	E	GND	GND	
	C	0.0-1.6	1.2-1.8	Pulse Float
Q606	B	0.0-0.7	0.7	Pulse
	E	0.0-0.2	0.2	Pulse
	C	0.0-1.2	1.2	Pulse
Q607	B	0.0-0.7	0.7	Pulse
	E	GND	GND	
	C	0.0-2.8	0.0	Pulse
Q609	B	0.0	0.0	
	E	GND	GND	
	C	0.0	2.8	
Q610	B	0.0	0.0	
	E	GND	GND	
	C	2.8-3.0	2.8	Pulse
Q611	B	0.0	0.0	
	E	GND	GND	Pulse
	C	2.8-3.0	2.8	Pulse
Q612	B	0.0	0.0	
	E	GND	GND	
	C	3.7	3.7	
Q613	B	3.8	3.8	
	E	3.8	3.8	
	C	0.0	0.0	

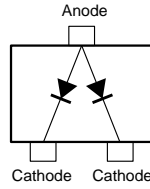
SEMICONDUCTOR LEAD IDENTIFICATION

Base Unit

D1/D23/D24/D26 : 1N4148
D3 : HZ7C3
D9 : HZ33CP
D20 : HZ4A1
D21 : HZ7A1
D22 : HZ9B2



D2/D4/D6/D10
/D11/D12/D13 : DCA010
D16 : HSM88WA



D5/D7/D8/D14/D25/D407/D409
/D413/D417/D418/D419 : RLS4148
D414 : HZK6C



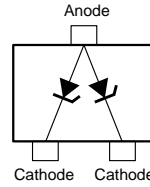
D15 : RB500V



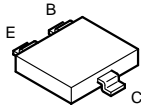
D401/D408 : SML-310LT
D402/D406 : SML-310MT



D403 : NNCD6.2F



Q1 : 2SC2714
Q2/Q3/Q7/Q9 : 2SA812(M)
Q4 : 2SC2712
Q5/Q6/Q8/Q10/Q11/Q12/Q13
/Q14/Q15/Q16/Q17/Q19/Q401
/Q402/Q403/Q405/Q406/Q407 : 2SC1623

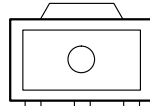


B : Base
E : Emitter
C : Collector

Q18/Q21/Q23
/Q24/Q25 : 2SD471

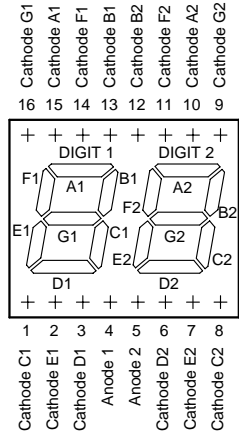


Q22/Q404 : 2SD1618

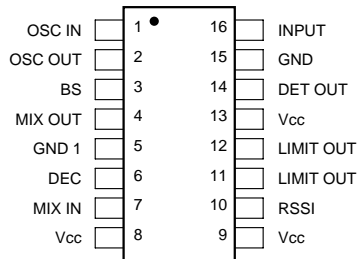


B : Base
C : Collector
E : Emitter

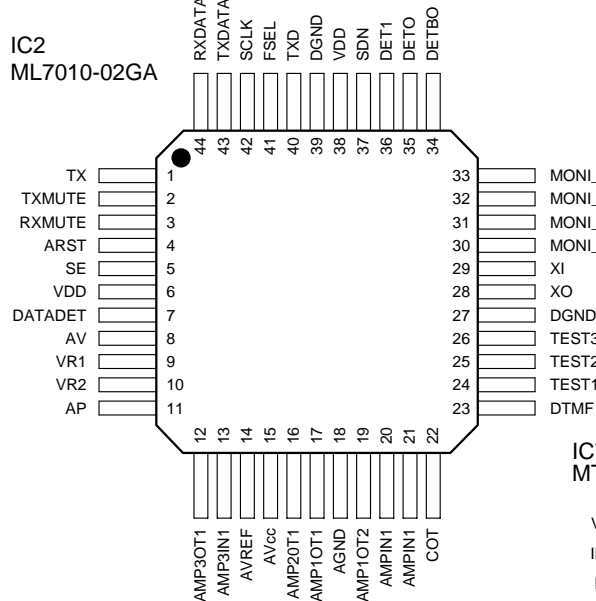
D405 : LTD-482P



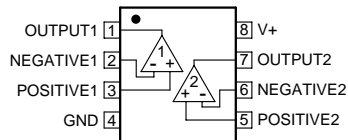
IC1
TA31161FN



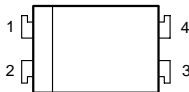
IC2
ML7010-02GA



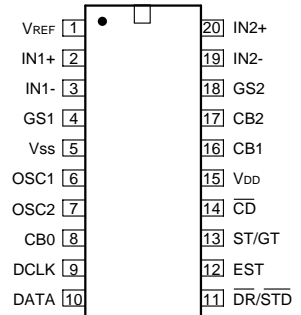
IC3 : M5223FP



IC5/IC6
TLP521



IC7
MT88E45ASR



Pin diagram of the P89C46 microcontroller. The diagram shows a 40-pin package with pins numbered 1 to 40. Pins 1-16 are on the left, 17-32 are at the bottom, and 33-40 are on the right. Each pin is connected to a specific function.

Left Side (Pins 1-16):

- P50/A8
- P51/A9
- P52/A10
- P53/A11
- P54/A12
- P55/A13
- P56/A14
- P57/A15
- VSS0
- VDD0
- P30
- P31
- P32
- P33
- P34/SI31
- P35/SO31

Bottom Side (Pins 17-32):

- P36/SCK31
- P20/SI30
- P21/SO30
- P22/SCK30
- P23/RxD0
- P24/TxD0
- P25/ASCk0
- VDD1
- AVSS
- P17/AN17
- P16/AN16
- P15/AN15
- P14/AN14
- P13/AN13
- P12/AN12
- P11/AN11

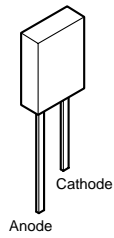
Right Side (Pins 33-40):

- P10/AN10
- AVREF
- AVDD
- RESET
- XT2
- XT1
- IC
- X2
- X1
- VSS1
- P00/INTP0
- P01/INTP1
- P02/INTP2
- P03/INTP3/ADTRG
- P70/TI00/TO0
- P71/TI01

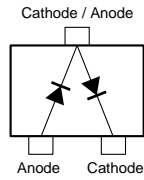
Vss	1	40	Vcc
CLE	2	39	CE
ALE	3	38	RE
WE	4	37	R / B
WP	5	36	GND
N.C.	6	35	N.C.
N.C.	7	34	N.C.
N.C.	8	33	N.C.
N.C.	9	32	N.C.
N.C.	10	31	N.C.
N.C.	11	30	N.C.
N.C.	12	29	N.C.
N.C.	13	28	N.C.
N.C.	14	27	N.C.
N.C.	15	26	N.C.
I/O0	16	25	I/O7
I/O1	17	24	I/O6
I/O2	18	23	I/O5
I/O3	19	22	I/O4
Vss	20	21	Vcc

Handset

D608/D609/D610 : PG3822K



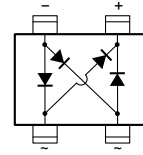
D611 : DCC010
D614/D615 : 1SS226



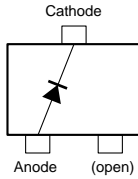
D613 : RLS4148



D616 : S1ZB20



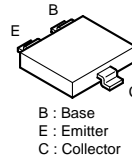
D617 : RB420D



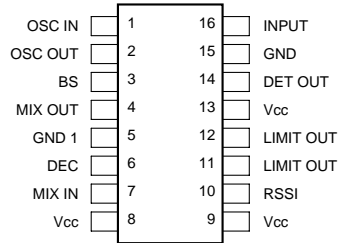
D619 : RB500V



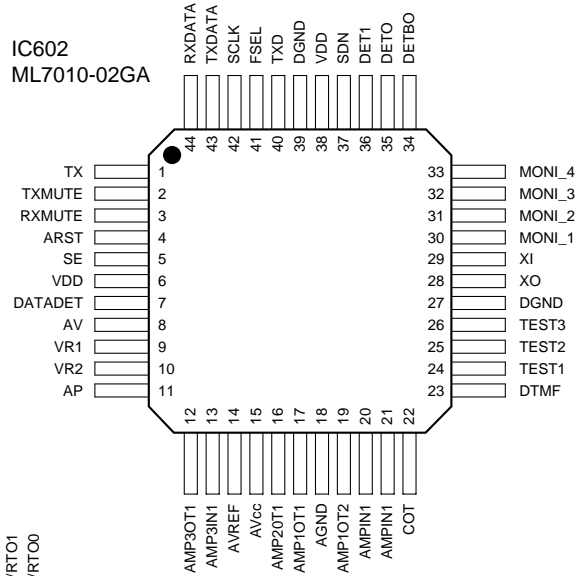
Q604/Q606/Q607/Q609
/Q610/Q611/Q612 : 2SC1623
Q605 : 2SC2714
Q608/Q613 : 2SA812(M)



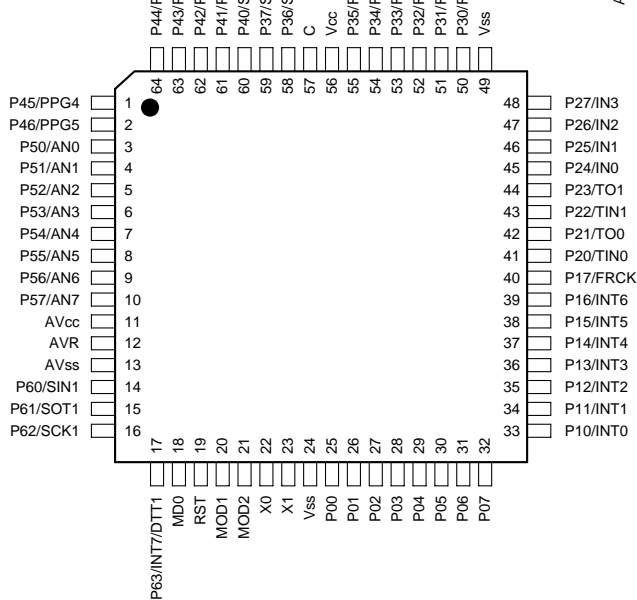
IC601
TA31161FN



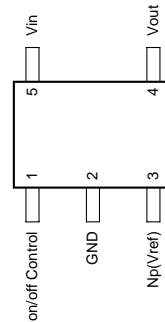
IC602
ML7010-02GA



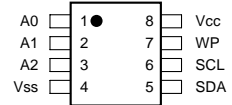
IC606
MB90562PFM



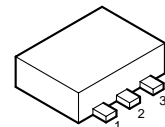
IC603
TK11130SCL



IC604
24LC16BT/SN



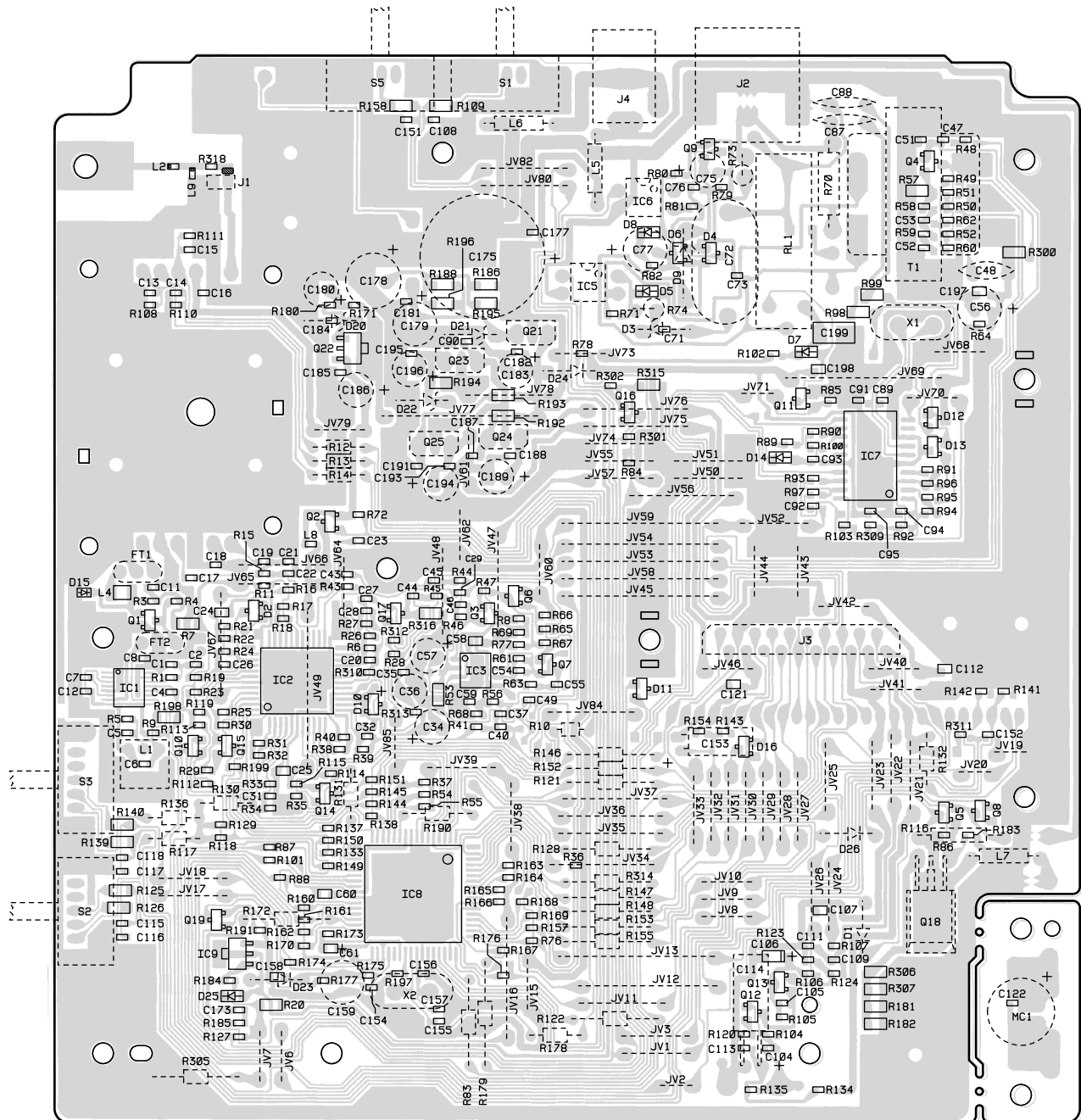
IC605 : RH5RE32AA
IC607 : RH5VL28CA



ELECTRICAL PARTS LOCATION

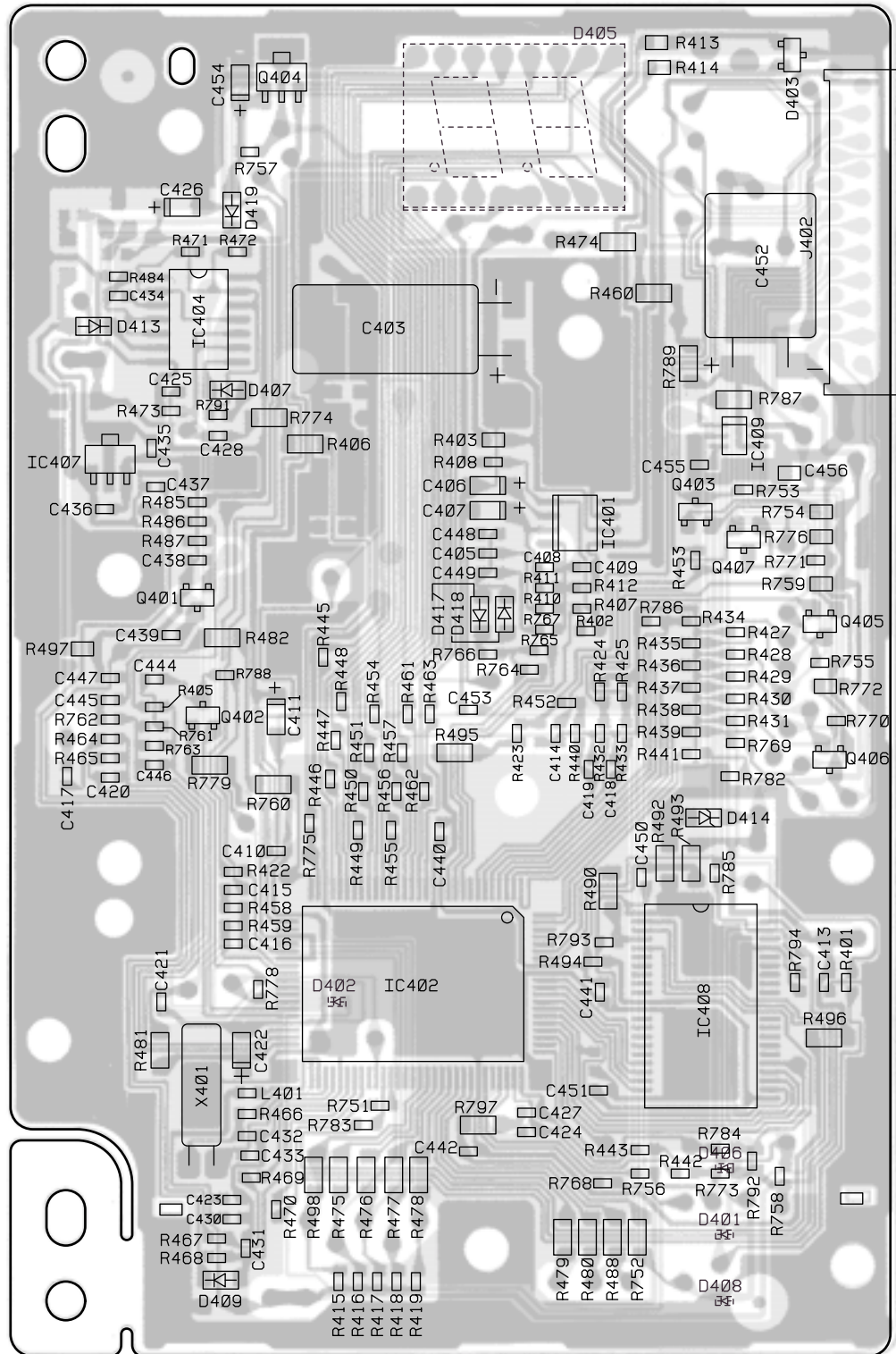
Base Unit

Main PCB



Base Unit

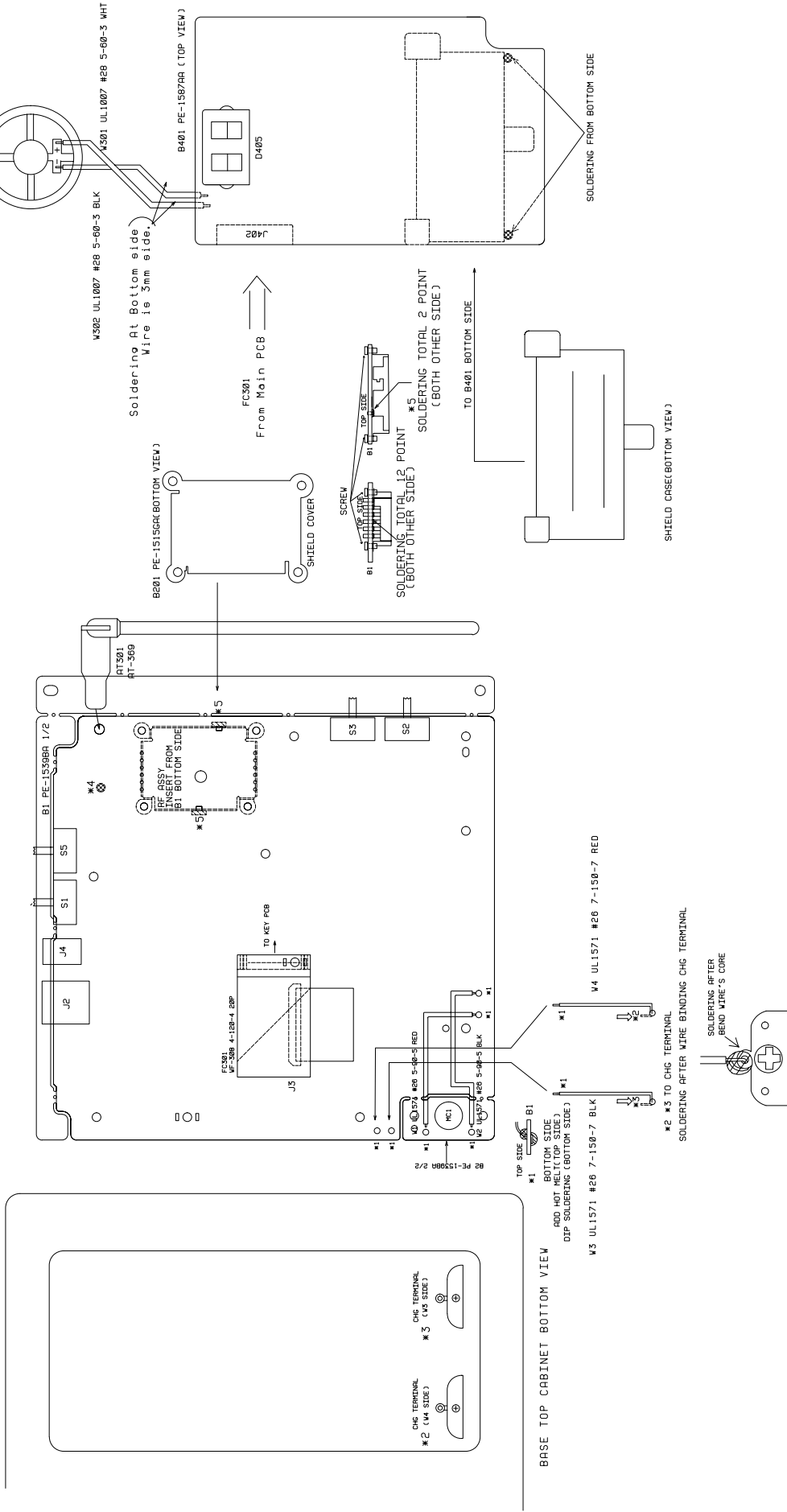
Key PCB



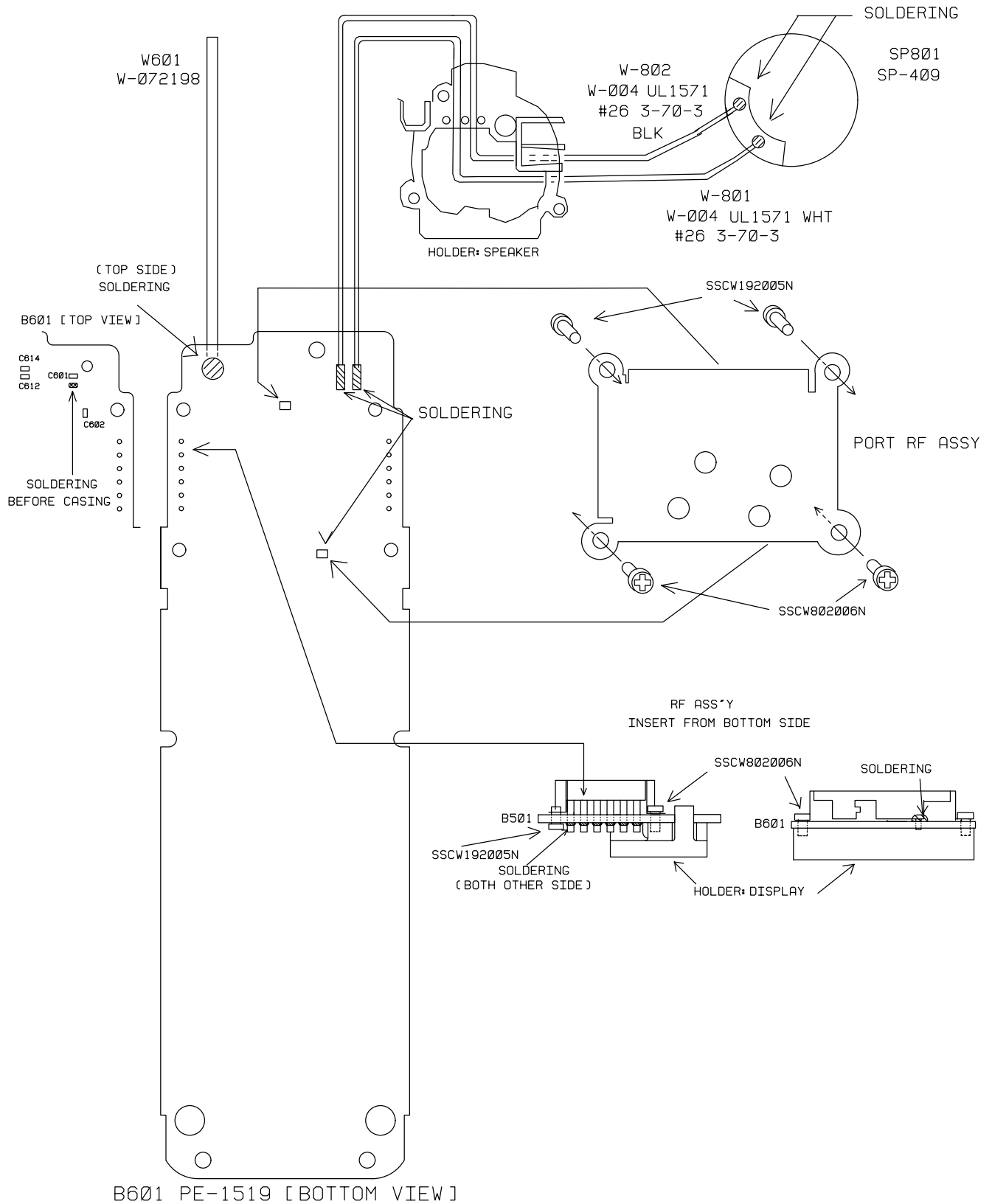
WIRING DIAGRAMS

Base Unit

*4 SOLDERING SHORT BEFORE CASING
 (BOTTOM SIDE)

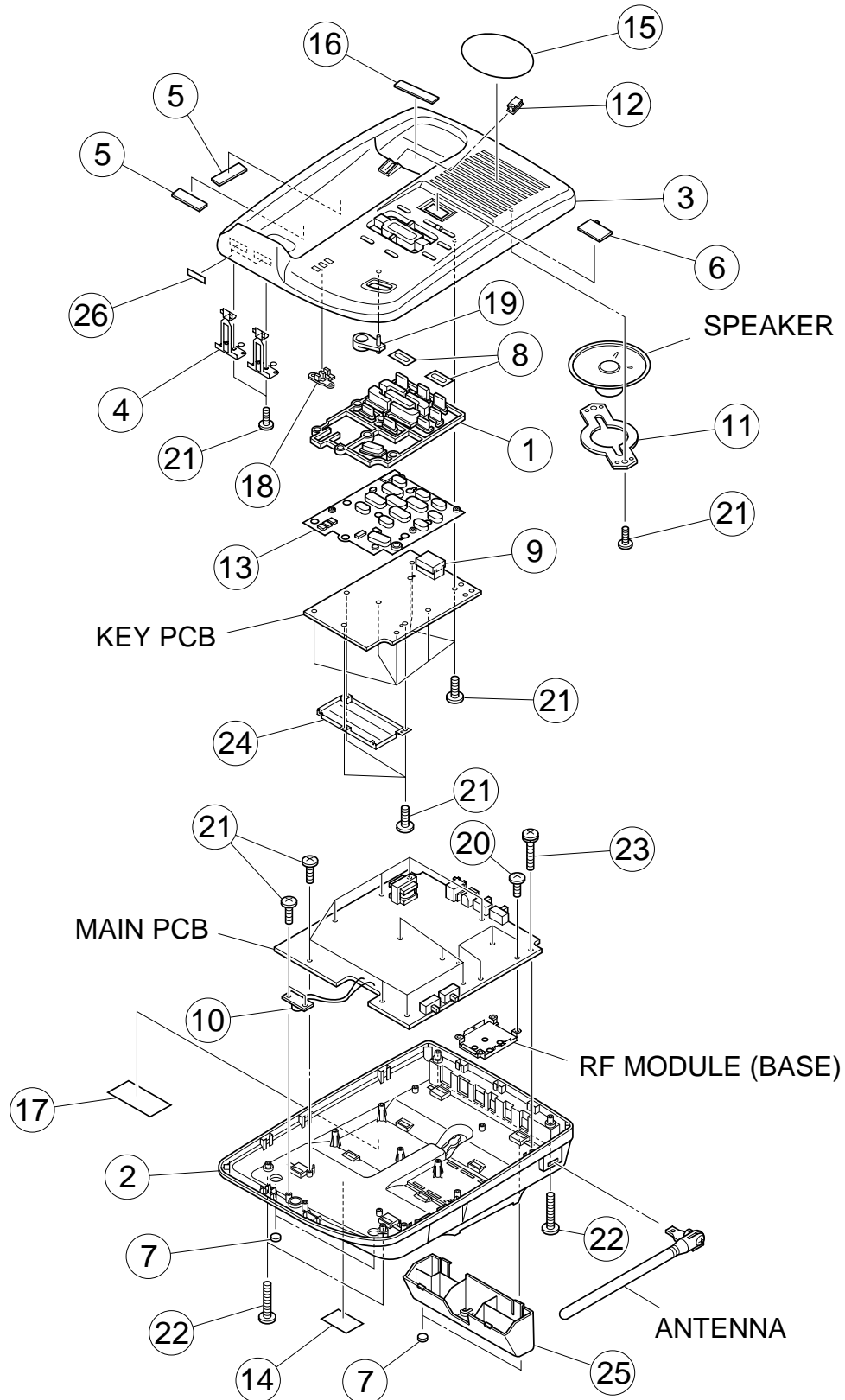


Handset



EXPLODED VIEWS AND MECHANICAL PARTS LIST

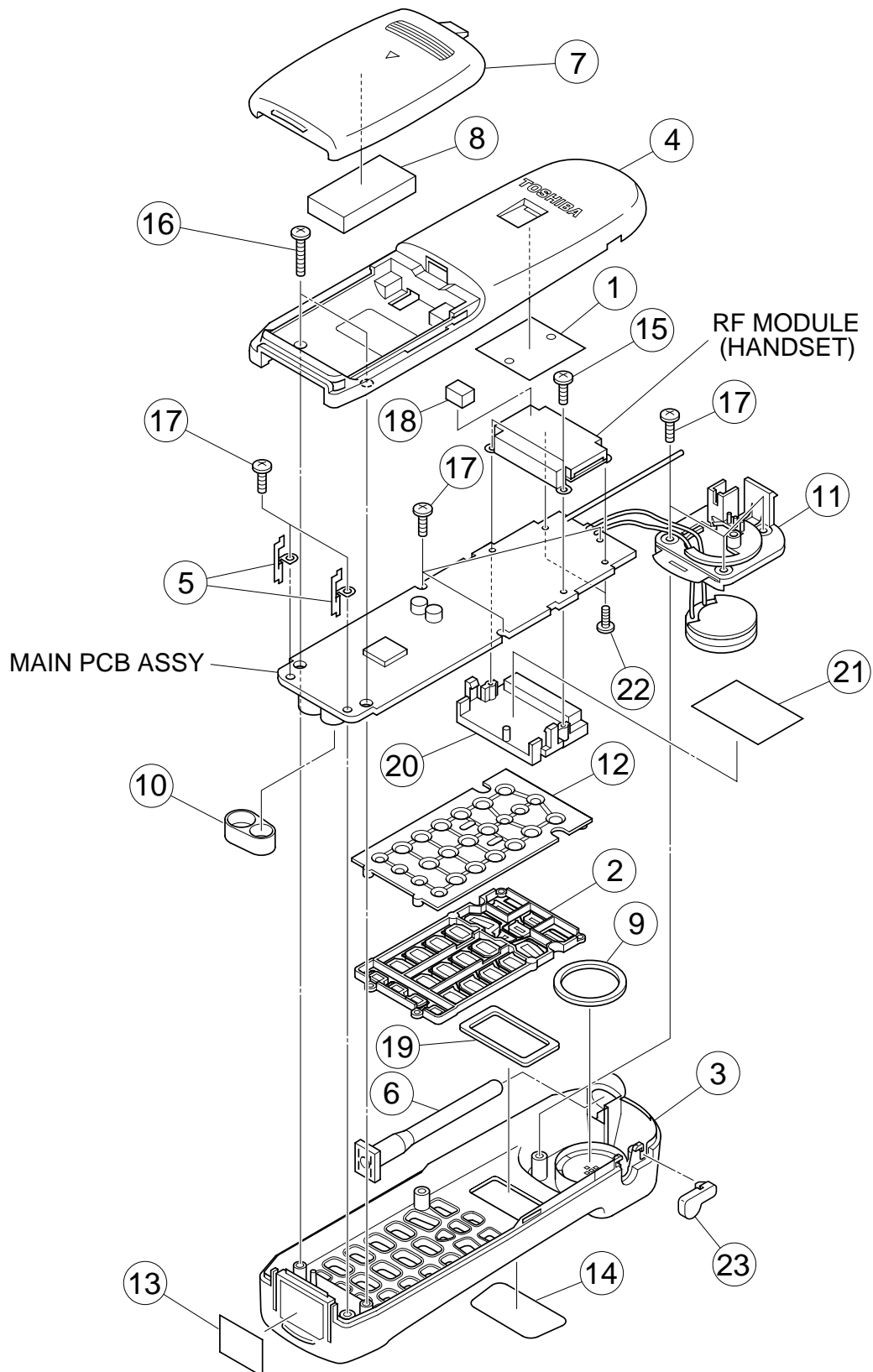
Base Unit



Base Unit

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION		QTY
1	RC009047	GNBZ443202Z	BUTTON, FUNCTION	ABS	1
2	RC009045	GCAS243201Z	CASE, BOTTOM	ABS	1
3	RC009044	GCAS243200Z	CASE, TOP	ABS	1
4	RC008414	HTML442750Z	CHARGE TERMINAL	C5191(PBP)	2
5	RC005608	RCUN451804Z	CUSHION	NEOPRENE	2
6	RC005439	GCAS254442Z	DISPLAY WINDOW	PMMA	1
7	RC002384	LFUT428079Z	FOOT	BUMPON SJ-5916 1.6T	4
8	RC008013	RBLD459155A	HIMELON		2
9	RC008891	GHDZ350921Z	HOLDER, DISPLAY	ABS	1
10	RC005689	LHDZ453179Z	HOLDER, MIC	CR	1
11	RC005444	HHDS431080B	HOLDER, SPEAKER	SUS304 CSP 0.8T 3/4H OR H	1
12	RC009046	GCAS445155Z	HOOK	ABS	1
13	RC008499	LNBZ342500Z	KEY RUBBER	SI	1
14	RC009048	PLBB443501Z	LABEL, BARCODE	PAPER	1
15	RC009050	PLBZ443502Z	LABEL, INDICATION		1
16	RC005329	PLBZ456718Z	LABEL, INDICATION		1
17	RC009049	PLBZ443500Z	LABEL, TA	POLYESTER	1
18	RC008818	GCAS458189Z	LED LENS	PMMA	1
19	RC008939	GCAS458534Z	LED LENS	PMMA	1
20	RC008289	SSCW192005N	SCREW, BIND HD +	M2X5 NI	4
21	RC000941	SSCW802608N	SCREW, P TIGHT BIND HD +	D2.6X8 NI	26
22	RC004028	SSCW802616N	SCREW, P TIGHT BIND HD +	D2.6X16 NI	4
23	RC001752	SSCW283012N	SCREW, TAPPING BIND+& SP WASHER	D3X12 NI	1
24	RC008498	HSDC342495Z	SHIELD COVER	SPTE	1
25	RC008262	GCAS443211Z	STAND	ABS	1
26	RC005696	RUTC457032Z	WOOL COATED PAPER, WOOL TACK		2


Handset



Handset

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION		QTY
1	RC008346	RBLD442400Z	BLIND	PC	1
2	RC009055	GNBZ443171Z	BUTTON, FUNCTION	ABS	1
3	RC009052	GCAS343203Z	CASE, FRONT	ABS	1
4	RC009051	GCAS343168A	CASE, REAR	ABS	1
5	RC008342	HTML442336Z	CHARGE TERMINAL	C2680(BSP)	2
6	RC008703	GCAS457897Z	COVER, ANTENNA	ELASTOMER	1
7	RC009053	GCAS443169Z	COVER, BATTERY	ABS	1
8	RC008347	RCUM441150Z	CUSHION	MOLTPRENE,40x20x8	1
9	RC008348	RCUN442433Z	CUSHION	NEOPRENE	1
10	RC008709	LHDZ456969Z	HOLDER, MIC	EPDM	1
11	RC009054	GHDZ443170A	HOLDER, SPEAKER	ABS	1
12	RC008464	LNBZ342420Z	KEY RUBBER	SI	1
13	RC009058	PLBS443503Z	LABEL, ID	POLYESTER	1
14	RC009057	KDPZ443173Z	PLATE, DISPLAY	PC	1
15	RC008289	SSCW192005N	SCREW, BIND HD +	M2x5 NI	2
16	RC003327	SSCW802610N	SCREW, P TIGHT BIND HD +	D2.6x10 NI	2
17	RC000941	SSCW802608N	SCREW, P TIGHT BIND HD +	D2.6x8 NI	8
18	RC008465	RCUN443255Z	CUSHION	NBR	1
19	RC008466	RCUN459780Z	CUSHION	NEOPRENE	1
20	RC008456	GHDZ459779Z	HOLDER, DISPLAY	PC	1
21	RC008457	RETC459777Z	REFLECTION SHEET		1
22	RC000940	SSCW802006N	SCREW, P TIGHT BIND HD +	D2x6 NI	2
23	RC009021	LPAK442703Z	CAP	CR	1

PARTS LIST

PRODUCT SAFETY NOTE : Products marked with a  have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice of this service manual. Don't degrade the safety of the product through important servicing.

Symbol	F	G	J	K	M	N	Z	P
%	± 1	± 2	± 5	± 10	± 20	± 30	-20+80	0+100

Symbol	C	D
pF	± 0.25	± 0.5

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
CAPACITORS				
The following codes indicate variation of capacitors against temperatures,:				
YA=±5%, YB=±10%, YD=+20-30%, YE=+20-50%(-25~+85°C), ZF=+30-80%,(-10~+79°C),				
CH=0±60ppm/°C, TH=-470ppm/°C, ±60ppm/°C, B=±10%, F=+30-80%,				
SL=+350ppm/°C~-1000ppm/°C, UJ=-750ppm/°C ±120ppm/°C, CJ=0±120ppm/°C, CK=0±250ppm/°C				
C1	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C2	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C4	RC005224	BCMT813091Z	CERAMIC M/L (1608)	3PF 50V C CJ
C5	RC008645	BCMN811514Z	CERAMIC M/L (1608)	150PF 50V J RH
C6	RC008646	BCMN812204Z	CERAMIC M/L (1608)	22PF 50V J RH
C7	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C8	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C11	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C12	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C13	RC005210	BCMM811014Z	CERAMIC M/L (1608)	100PF 50V J CH
C14	RC005210	BCMM811014Z	CERAMIC M/L (1608)	100PF 50V J CH
C15	RC005210	BCMM811014Z	CERAMIC M/L (1608)	100PF 50V J CH
C16	RC005210	BCMM811014Z	CERAMIC M/L (1608)	100PF 50V J CH
C17	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C18	RC005210	BCMM811014Z	CERAMIC M/L (1608)	100PF 50V J CH
C19	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C20	RC005206	BCML812225Z	CERAMIC M/L (1608)	0.0022UF 50V K B
C21	RC005219	BCMM814704Z	CERAMIC M/L (1608)	47PF 50V J CH
C22	RC005420	BCMM811514Z	CERAMIC M/L (1608)	150PF 50V J CH
C23	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C24	RC005401	BCXT111055Z	CERAMIC M/L (2125)	1UF 10V K B
C25	RC008731	BCXK311050Z	CERAMIC M/L (2125)	1UF 16V Z F
C26	RC005359	BCMM812204Z	CERAMIC M/L (1608)	22PF 50V J CH
C27	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C28	RC005289	BCMM815091Z	CERAMIC M/L (1608)	5PF 50V C CH
C29	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C31	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C32	RC008008	BCMM812714Z	CERAMIC M/L (1608)	270PF 50V J CH
C34	RC001802	BCAZ314706Z	ELECTROLYTIC	47UF 16V M C-156
C35	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C36	RC001802	BCAZ314706Z	ELECTROLYTIC	47UF 16V M C-156
C37	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
C40	RC008318	BCML815625Z	CERAMIC M/L (1608)	0.0056UF 50V K B
C43	RC008270	BCML811235Z	CERAMIC M/L (1608)	0.012UF 50V K B
C44	RC005208	BCML814725Z	CERAMIC M/L (1608)	0.0047UF 50V K B
C45	RC005206	BCML812225Z	CERAMIC M/L (1608)	0.0022UF 50V K B
C46	RC008485	BCMM813914Z	CERAMIC M/L (1608)	390PF 50V J CH
C47	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C48	RC000777	BCZY0120001	SEMI-CONDUCTOR	CZ-120 0.022UF 18V
C49	RC005203	BCML512235Z	CERAMIC M/L (1608)	0.022UF 25V K B
C51	RC008393	BCML812725Z	CERAMIC M/L (1608)	0.0027UF 50V K B
C52	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C53	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C54	RC008583	BCMM811814Z	CERAMIC M/L (1608)	180PF 50V J CH
C55	RC008843	BCML313335Z	CERAMIC M/L (1608)	0.033UF 16V K B
C56	RC001800	BCAZ311016Z	ELECTROLYTIC	100UF 16V M C-156
C57	RC001802	BCAZ314706Z	ELECTROLYTIC	47UF 16V M C-156
C58	RC008731	BCXK311050Z	CERAMIC M/L (2125)	1UF 16V Z F
C59	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C60	RC008731	BCXK311050Z	CERAMIC M/L (2125)	1UF 16V Z F
C61	RC008731	BCXK311050Z	CERAMIC M/L (2125)	1UF 16V Z F
C71	RC005208	BCML814725Z	CERAMIC M/L (1608)	0.0047UF 50V K B
C72	RC008111	BCZY0259001	MYLAR METALLIZED	CZ-259 1UF 250V
C73	RC005208	BCML814725Z	CERAMIC M/L (1608)	0.0047UF 50V K B
C75	RC001805	BCAZ811096Z	ELECTROLYTIC	1UF 50V M C-156
C76	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C77	RC004167	BCAZ511016Z	ELECTROLYTIC	100UF 25V M C-156
C87	RC005512	BCKB131025Z	CERAMIC	0.001UF 1000V K YB(B)
C88	RC005512	BCKB131025Z	CERAMIC	0.001UF 1000V K YB(B)
C89	RC005289	BCMM815091Z	CERAMIC M/L (1608)	5PF 50V C CH
C90	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C91	RC005289	BCMM815091Z	CERAMIC M/L (1608)	5PF 50V C CH
C92	RC008393	BCML812725Z	CERAMIC M/L (1608)	0.0027UF 50V K B
C93	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C94	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C95	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C104	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C105	RC005276	BCML818225Z	CERAMIC M/L (1608)	0.0082UF 50V K B
C106	RC008296	BCSH901006Z	TANTALUM CHIP	10UF 6.3V M C-122
C107	RC008731	BCXK311050Z	CERAMIC M/L (2125)	1UF 16V Z F
C108	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C109	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C111	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C112	RC008731	BCXK311050Z	CERAMIC M/L (2125)	1UF 16V Z F
C113	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C114	RC001794	BCAZ111016Z	ELECTROLYTIC	100UF 10V M C-156
C115	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C116	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C117	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
C118	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C121	RC008731	BCXK311050Z	CERAMIC M/L (2125) 1UF 16V Z F
C122	RC005204	BCML811025Z	CERAMIC M/L (1608) 0.001UF 50V K B
C151	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C152	RC005204	BCML811025Z	CERAMIC M/L (1608) 0.001UF 50V K B
C153	RC001802	BCAZ314706Z	ELECTROLYTIC 47UF 16V M C-156
C154	RC005204	BCML811025Z	CERAMIC M/L (1608) 0.001UF 50V K B
C155	RC008644	BCMM812707Z	CERAMIC M/L (1608) 27PF 50V G CH
C156	RC008643	BCMM812207Z	CERAMIC M/L (1608) 22PF 50V G CH
C157	RC005223	BCMS812091Z	CERAMIC M/L (1608) 2PF 50V C CK
C158	RC008731	BCXK311050Z	CERAMIC M/L (2125) 1UF 16V Z F
C159	RC004445	BCAZ903316Z	ELECTROLYTIC 330UF 6.3V M C-156
C173	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C175	RC008584	BCZT314726Z	ELECTROLYTIC 4700UF 16V M C-276
C177	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C178	RC008106	BCAZ313316Z	ELECTROLYTIC 330UF 16V M C-156
C179	RC001800	BCAZ311016Z	ELECTROLYTIC 100UF 16V M C-156
C180	RC001802	BCAZ314706Z	ELECTROLYTIC 47UF 16V M C-156
C181	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C182	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C183	RC001802	BCAZ314706Z	ELECTROLYTIC 47UF 16V M C-156
C184	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C185	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C186	RC001802	BCAZ314706Z	ELECTROLYTIC 47UF 16V M C-156
C187	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C188	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C189	RC001802	BCAZ314706Z	ELECTROLYTIC 47UF 16V M C-156
C191	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C193	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C194	RC001802	BCAZ314706Z	ELECTROLYTIC 47UF 16V M C-156
C195	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C196	RC001802	BCAZ314706Z	ELECTROLYTIC 47UF 16V M C-156
C197	RC008731	BCXK311050Z	CERAMIC M/L (2125) 1UF 16V Z F
C198	RC008731	BCXK311050Z	CERAMIC M/L (2125) 1UF 16V Z F
C199	RC008110	BCZY0202001	SEMI-CONDUCTOR CZ-202 0.022UF 18V M
C403	RC001811	BCAZ901016Z	ELECTROLYTIC 100UF 6.3V M C-156
C405	RC008146	BCML816825Z	CERAMIC M/L (1608) 0.0068UF 50V K B
C406	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C407	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C408	RC005219	BCMM814704Z	CERAMIC M/L (1608) 47PF 50V J CH
C409	RC008485	BCMM813914Z	CERAMIC M/L (1608) 390PF 50V J CH
C410	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C411	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C413	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C414	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C415	RC005276	BCML818225Z	CERAMIC M/L (1608) 0.0082UF 50V K B
C416	RC008926	BCMM518214Z	CERAMIC M/L (1608) 820PF 25V J CH

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
C417	RC008270	BCML811235Z	CERAMIC M/L (1608)	0.012UF 50V K B
C418	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C419	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C420	RC005206	BCML812225Z	CERAMIC M/L (1608)	0.0022UF 50V K B
C421	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C422	RC008296	BCSH901006Z	TANTALUM CHIP	10UF 6.3V M C-122
C423	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C424	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C425	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C426	RC008296	BCSH901006Z	TANTALUM CHIP	10UF 6.3V M C-122
C427	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C428	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C430	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C431	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C432	RC005209	BCMM811002Z	CERAMIC M/L (1608)	10PF 50V D CH
C433	RC005209	BCMM811002Z	CERAMIC M/L (1608)	10PF 50V D CH
C434	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C435	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C436	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C437	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C438	RC005205	BCML811035Z	CERAMIC M/L (1608)	0.01UF 50V K B
C439	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C440	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C441	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C442	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C444	RC005203	BCML512235Z	CERAMIC M/L (1608)	0.022UF 25V K B
C445	RC008926	BCMM518214Z	CERAMIC M/L (1608)	820PF 25V J CH
C446	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C447	RC005274	BCML811535Z	CERAMIC M/L (1608)	0.015UF 50V K B
C448	RC005274	BCML811535Z	CERAMIC M/L (1608)	0.015UF 50V K B
C449	RC005208	BCML814725Z	CERAMIC M/L (1608)	0.0047UF 50V K B
C450	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C451	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C452	RC008884	BCAZ904716Z	ELECTROLYTIC	470UF 6.3V M C-156
C453	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C454	RC008296	BCSH901006Z	TANTALUM CHIP	10UF 6.3V M C-122
C455	RC005203	BCML512235Z	CERAMIC M/L (1608)	0.022UF 25V K B
C456	RC008731	BCXK311050Z	CERAMIC M/L (2125)	1UF 16V Z F
C601	RC005210	BCMM811014Z	CERAMIC M/L (1608)	100PF 50V J CH
C602	RC005209	BCMM811002Z	CERAMIC M/L (1608)	10PF 50V D CH
C603	RC005224	BCMT813091Z	CERAMIC M/L (1608)	3PF 50V C CJ
C604	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C605	RC005202	BCML311045Z	CERAMIC M/L (1608)	0.1UF 16V K B
C606	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B
C607	RC005401	BCXT111055Z	CERAMIC M/L (2125)	1UF 10V K B
C608	RC005359	BCMM812204Z	CERAMIC M/L (1608)	22PF 50V J CH
C609	RC005204	BCML811025Z	CERAMIC M/L (1608)	0.001UF 50V K B

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
C611	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C612	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C613	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C614	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C615	RC005210	BCMM811014Z	CERAMIC M/L (1608) 100PF 50V J CH
C617	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C618	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C619	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C620	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C621	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C622	RC008731	BCXK311050Z	CERAMIC M/L (2125) 1UF 16V Z F
C623	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C624	RC005214	BCMM812214Z	CERAMIC M/L (1608) 220PF 50V J CH
C625	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C626	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C627	RC005203	BCML512235Z	CERAMIC M/L (1608) 0.022UF 25V K B
C628	RC005203	BCML512235Z	CERAMIC M/L (1608) 0.022UF 25V K B
C630	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C631	RC008757	BCMM818204Z	CERAMIC M/L (1608) 82PF 50V J CH
C632	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C633	RC005420	BCMM811514Z	CERAMIC M/L (1608) 150PF 50V J CH
C634	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C635	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C636	RC008296	BCSH901006Z	TANTALUM CHIP 10UF 6.3V M C-122
C637	RC005203	BCML512235Z	CERAMIC M/L (1608) 0.022UF 25V K B
C638	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C639	RC008731	BCXK311050Z	CERAMIC M/L (2125) 1UF 16V Z F
C640	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C641	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C642	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C643	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C644	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C645	RC005222	BCMS811091Z	CERAMIC M/L (1608) 1PF 50V C CK
C646	RC008643	BCMM812207Z	CERAMIC M/L (1608) 22PF 50V G CH
C647	RC005204	BCML811025Z	CERAMIC M/L (1608) 0.001UF 50V K B
C648	RC008644	BCMM812707Z	CERAMIC M/L (1608) 27PF 50V G CH
C649	RC005207	BCML813325Z	CERAMIC M/L (1608) 0.0033UF 50V K B
C650	RC005207	BCML813325Z	CERAMIC M/L (1608) 0.0033UF 50V K B
C651	RC005204	BCML811025Z	CERAMIC M/L (1608) 0.001UF 50V K B
C652	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C653	RC005204	BCML811025Z	CERAMIC M/L (1608) 0.001UF 50V K B
C654	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C655	RC005205	BCML811035Z	CERAMIC M/L (1608) 0.01UF 50V K B
C656	RC003284	BCFZ901016Z	ELECTROLYTIC 100UF 6.3V M C-258
C657	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C658	RC005202	BCML311045Z	CERAMIC M/L (1608) 0.1UF 16V K B
C659	RC008645	BCMN811514Z	CERAMIC M/L (1608) 150PF 50V J RH

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
C660	RC008646	BCMN812204Z	CERAMIC M/L (1608)	22PF 50V J RH
C661	RC003284	BCFZ901016Z	ELECTROLYTIC	100UF 6.3V M C-258
C670	RC005276	BCML818225Z	CERAMIC M/L (1608)	0.0082UF 50V K B
C671	RC005208	BCML814725Z	CERAMIC M/L (1608)	0.0047UF 50V K B
DIODES				
D1	RC002236	BDAY0246003		1N4148
D2	RC004630	BDAY0422001		DCC010
D3	RC002470	BDAY0492033	ZENER	HZ7C3
D4	RC002658	BDAY0423002		DCB010
D5	RC001826	BDAY0433001		RLS4148
D6	RC009030	BDAY0420002		DCA010
D7	RC001826	BDAY0433001		RLS4148
D8	RC001826	BDAY0433001		RLS4148
D9	RC003194	BDAY0272010	ZENER	HZ33CP
D10	RC004630	BDAY0422001		DCC010
D11	RC002658	BDAY0423002		DCB010
D12	RC002658	BDAY0423002		DCB010
D13	RC009030	BDAY0420002		DCA010
D14	RC001826	BDAY0433001		RLS4148
D15	RC008083	BDAY1063001		RB500V-40
D16	RC002240	BDAY0485001		HSM88WA
D20	RC009031	BDAY0492054	ZENER	HZ4A1
D21	RC003196	BDAY0492025	ZENER	HZ7A1
D22	RC008585	BDAY0492022	ZENER	HZ9B2
D23	RC002236	BDAY0246003		1N4148
D24	RC002236	BDAY0246003		1N4148
D25	RC001826	BDAY0433001		RLS4148
D26	RC002236	BDAY0246003		1N4148
D401	RC008320	BDAY1092001	LED	SML-310LT
D402	RC008407	BDAY1060001	LED	SML-310MT
D403	RC008486	BDAY1091001	ZENER	NNCD6.2F-T1B
D405	RC005412	BDAY0825001	LED	LTD-482P-03
D406	RC008407	BDAY1060001	LED	SML-310MT
D407	RC001826	BDAY0433001		RLS4148
D408	RC008320	BDAY1092001	LED	SML-310LT
D409	RC001826	BDAY0433001		RLS4148
D413	RC001826	BDAY0433001		RLS4148
D414	RC003195	BDAY0432004	ZENER	HZK6C
D417	RC001826	BDAY0433001		RLS4148
D418	RC001826	BDAY0433001		RLS4148
D419	RC001826	BDAY0433001		RLS4148
D608	RC005534	BDAY0931001	LED	PG3822K
D609	RC005534	BDAY0931001	LED	PG3822K
D610	RC005534	BDAY0931001	LED	PG3822K
D611	RC004630	BDAY0422001		DCC010
D613	RC001826	BDAY0433001		RLS4148
D614	RC001635	BDAY0274001		1SS226

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
D615	RC001635	BDAY0274001	BRIDGE	1SS226
D616	RC004904	BDAY0792001		S1ZB20-4062
D617	RC008448	BDAY1065001		RB420D
D619	RC008083	BDAY1063001		RB500V-40
FILTERS				
FT1	RC008652	BFLY0967001	CERAMIC	FL-967 FFE1054MS11SBL
FT2	RC008653	BFLY0984001	CERAMIC	FL-984 SFE10.54MHY13-A
FT601	RC008652	BFLY0967001	CERAMIC	FL-967 FFE1054MS11SBL
FT602	RC008653	BFLY0984001	CERAMIC	FL-984 SFE10.54MHY13-A
IC's				
IC1	RC008651	BDEY2536003	UC2332A	TA31161FN EL
IC2	RC008649	BDDY0873002		ML7010-02GA
IC3	RC004045	BDEY0861002		M5223FP-600C
IC5	RC004636	BDEY2163001		⚠ TLP521-1
IC6	RC004636	BDEY2163001	UC2426	⚠ TLP521-1
IC7	RC008623	BDEY3849003		MT88E45ASR
IC8	RC009032	BDDY0967001		UPD780024AGC-518-AB8
IC9	RC009033	BDEY2940003		RH5VL40AA-T1
IC401	RC005423	BDEY1533003	UC2369B SEL	MC34119D R2
IC402	RC009038	BDDY0993001		D16559UAB11AQC-3V
IC404	RC009039	BDEY1660003		TC74HC132AF-EL
IC407	RC004595	BDEY2486003		RH5VL45AA-T1
IC408	RC008489	BDEY3868001	UC2332A	KM29W040AT
IC409	RC009040	BDEY3493003		TK11237BMCL
IC601	RC008651	BDEY2536003		TA31161FN EL
IC602	RC008649	BDDY0873002		ML7010-02GA
IC603	RC008322	BDEY3882003	UC2401	TK11130SCL
IC604	RC008799	BDEY3181003		24LC16BT/SN
IC605	RC008859	BDEY2927003		RH5RE32AA-T1
IC606	RC008678	BDDY0942001		MB90562PFM-G-114-BND
IC607	RC005074	BDEY2937003		RH5VL28CA-T1
JACKS				
J1	RC008658	BPGY0147002	PLUG	PG-147 9218B-1-02A-T 2P
J2	RC003586	BJKY0803002	TEL	⚠ JK-803 A36-006-4910A 2P
J3	RC005650	BJKY0944020		JK-944 IMSA-9604S-20C 20P
J4	RC001094	BJKY0234001		JK-234 DJ13-1
J402	RC005649	BJKY0943020		JK-943 9604S-20F 20P
J601	RC008658	BPGY0147002	PLUG	PG-147 9218B-1-02A-T 2P
J602	RC008679	BJKY0802001		JK-802 HSJ1102-01-510
J603	RC001653	BJKY0571001		JK-571 M60-002-020-HKAD
COILS				
L1	RC008654	BLBY1173001	COIL	LB-1173 218ANS-2736Z
L2	RC008673	BLZY0156566	INDUCTOR:MOLDED	LZ-156 LL1608-FH 0.0056UH
L4	RC004877	BLZY0087120	INDUCTOR:MOLDED CHIP	LZ-087 12UH J
L5	RC004073	BLZY0051479	INDUCTOR:MOLDED	LZ-051 SP0305-4R7K2 4.7UH
L6	RC004073	BLZY0051479	INDUCTOR:MOLDED	LZ-051 SP0305-4R7K2 4.7UH
L7	RC004073	BLZY0051479	INDUCTOR:MOLDED	LZ-051 SP0305-4R7K2 4.7UH

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
L8	RC008490	BLZY0203102	INDUCTOR:MOLDED CHIP	LZ-203 MMZ1608R102AT 1000
L9	RC008656	BLZY0156826	INDUCTOR:MOLDED	LZ-156 LL1608-FH 0.0082UH
L401	RC008490	BLZY0203102	INDUCTOR:MOLDED CHIP	LZ-203 MMZ1608R102AT 1000
L602	RC004877	BLZY0087120	INDUCTOR:MOLDED CHIP	LZ-087 12UH J
L603	RC008654	BLBY1173001	COIL	LB-1173 218ANS-2736Z
T1	RC003234	BTFY0265001	TRANSFORMER:HYBRID	⚠ TF-265 AT-24E7-1B/R295403
TRANSISTORS				
Q1	RC002245	BDBC2714124		2SC2714-Y
Q2	RC008275	BDBA0812695		2SA812(M)-M6A
Q3	RC008275	BDBA0812695		2SA812(M)-M6A
Q4	RC001637	BDBC2712303		2SC2712-GR
Q5	RC003031	BDBC1623648		2SC1623-L6
Q6	RC003031	BDBC1623648		2SC1623-L6
Q7	RC008275	BDBA0812695		2SA812(M)-M6A
Q8	RC003031	BDBC1623648		2SC1623-L6
Q9	RC008275	BDBA0812695		2SA812(M)-M6A
Q10	RC003031	BDBC1623648		2SC1623-L6
Q11	RC003031	BDBC1623648		2SC1623-L6
Q12	RC003031	BDBC1623648		2SC1623-L6
Q13	RC003031	BDBC1623648		2SC1623-L6
Q14	RC003031	BDBC1623648		2SC1623-L6
Q15	RC003031	BDBC1623648		2SC1623-L6
Q16	RC003031	BDBC1623648		2SC1623-L6
Q17	RC003031	BDBC1623648		2SC1623-L6
Q18	RC003200	BDBD0471111		2SD471-L
Q19	RC003031	BDBC1623648		2SC1623-L6
Q21	RC003200	BDBD0471111		2SD471-L
Q22	RC008955	BDBD1618119		2SD1618-T
Q23	RC003200	BDBD0471111		2SD471-L
Q24	RC003200	BDBD0471111		2SD471-L
Q25	RC003200	BDBD0471111		2SD471-L
Q401	RC003031	BDBC1623648		2SC1623-L6
Q402	RC003031	BDBC1623648		2SC1623-L6
Q403	RC003031	BDBC1623648		2SC1623-L6
Q404	RC008955	BDBD1618119		2SD1618-T
Q405	RC003031	BDBC1623648		2SC1623-L6
Q406	RC003031	BDBC1623648		2SC1623-L6
Q407	RC003031	BDBC1623648		2SC1623-L6
Q604	RC003031	BDBC1623648		2SC1623-L6
Q605	RC002245	BDBC2714124		2SC2714-Y
Q606	RC003031	BDBC1623648		2SC1623-L6
Q607	RC003031	BDBC1623648		2SC1623-L6
Q608	RC008275	BDBA0812695		2SA812(M)-M6A
Q609	RC003031	BDBC1623648		2SC1623-L6
Q610	RC003031	BDBC1623648		2SC1623-L6
Q611	RC003031	BDBC1623648		2SC1623-L6
Q612	RC003031	BDBC1623648		2SC1623-L6

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
Q613	RC008275	BDBA0812695	2SA812(M)-M6A	
RESISTORS				
R1	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J
R3	RC005432	BRFC161544Z	CARBON FIXED CHIP	150K 1/16W J
R4	RC005252	BRFC163314Z	CARBON FIXED CHIP	330 1/16W J
R5	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R6	RC005245	BRFC161834Z	CARBON FIXED CHIP	18K 1/16W J
R7	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J
R8	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R9	RC005251	BRFC163304Z	CARBON FIXED CHIP	33 1/16W J
R10	RC008557	BRPA611524Z	CARBON	1.5K 1/6W J
R11	RC008027	BRFC161234Z	CARBON FIXED CHIP	12K 1/16W J
R12	RC004177	BRPA612224Z	CARBON	2.2K 1/6W J
R13	RC004177	BRPA612224Z	CARBON	2.2K 1/6W J
R14	RC004177	BRPA612224Z	CARBON	2.2K 1/6W J
R15	RC005260	BRFC166834Z	CARBON FIXED CHIP	68K 1/16W J
R16	RC005280	BRFC161534Z	CARBON FIXED CHIP	15K 1/16W J
R17	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J
R18	RC005243	BRFC161054Z	CARBON FIXED CHIP	1M 1/16W J
R19	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R20	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J
R21	RC005245	BRFC161834Z	CARBON FIXED CHIP	18K 1/16W J
R22	RC005259	BRFC166814Z	CARBON FIXED CHIP	680 1/16W J
R23	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R24	RC005286	BRFC165644Z	CARBON FIXED CHIP	560K 1/16W J
R25	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R26	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J
R27	RC005288	BRFC168244Z	CARBON FIXED CHIP	820K 1/16W J
R28	RC005284	BRFC163334Z	CARBON FIXED CHIP	33K 1/16W J
R29	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J
R30	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R31	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J
R32	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R33	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R34	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R35	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R36	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R37	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J
R38	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J
R39	RC005432	BRFC161544Z	CARBON FIXED CHIP	150K 1/16W J
R40	RC008765	BRFC161004Z	CARBON FIXED CHIP	10 1/16W J
R41	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J
R43	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J
R44	RC005278	BRFC161244Z	CARBON FIXED CHIP	120K 1/16W J
R45	RC005249	BRFC162244Z	CARBON FIXED CHIP	220K 1/16W J
R46	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J
R47	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
R48	RC005280	BRFC161534Z	CARBON FIXED CHIP 15K 1/16W J
R49	RC005260	BRFC166834Z	CARBON FIXED CHIP 68K 1/16W J
R50	RC005260	BRFC166834Z	CARBON FIXED CHIP 68K 1/16W J
R51	RC005286	BRFC165644Z	CARBON FIXED CHIP 560K 1/16W J
R52	RC005259	BRFC166814Z	CARBON FIXED CHIP 680 1/16W J
R53	RC002804	BRFC181544Z	CARBON FIXED CHIP 150K 1/8W J
R54	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R55	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R56	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R57	RC008482	BRFC186804Z	CARBON FIXED CHIP 68 1/8W J
R58	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R59	RC005247	BRFC162214Z	CARBON FIXED CHIP 220 1/16W J
R60	RC008735	BRFC166824Z	CARBON FIXED CHIP 6.8K 1/16W J
R61	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R62	RC005261	BRFC168224Z	CARBON FIXED CHIP 8.2K 1/16W J
R63	RC005284	BRFC163334Z	CARBON FIXED CHIP 33K 1/16W J
R64	RC005239	BRFC161014Z	CARBON FIXED CHIP 100 1/16W J
R65	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R66	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R67	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R68	RC005281	BRFC162224Z	CARBON FIXED CHIP 2.2K 1/16W J
R69	RC005281	BRFC162224Z	CARBON FIXED CHIP 2.2K 1/16W J
R70	RC009037	BRZY0084001	METAL OXIDE (FORMED) ⚠ RZ-084 150 1WS J (P=12.5)
R71	RC005281	BRFC162224Z	CARBON FIXED CHIP 2.2K 1/16W J
R72	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R73	RC004183	BRSJ001024Z	METAL OXIDE ⚠ 1K 1WS J
R74	RC003231	BRSJ222234Z	METAL OXIDE ⚠ 22K 1/2WS J
R76	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R77	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R78	RC008767	BRFC163344Z	CARBON FIXED CHIP 330K 1/16W J
R79	RC008734	BRFC162254Z	CARBON FIXED CHIP 2.2M 1/16W J
R80	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R81	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R82	RC008479	BRFC161844Z	CARBON FIXED CHIP 180K 1/16W J
R83	RC004175	BRPA611034Z	CARBON 10K 1/6W J
R84	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R85	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R86	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R87	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R88	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R89	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R90	RC005286	BRFC165644Z	CARBON FIXED CHIP 560K 1/16W J
R91	RC005286	BRFC165644Z	CARBON FIXED CHIP 560K 1/16W J
R92	RC005260	BRFC166834Z	CARBON FIXED CHIP 68K 1/16W J
R93	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R94	RC005285	BRFC165634Z	CARBON FIXED CHIP 56K 1/16W J
R95	RC005262	BRFC168234Z	CARBON FIXED CHIP 82K 1/16W J

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
R96	RC005262	BRFC168234Z	CARBON FIXED CHIP 82K 1/16W J
R97	RC005285	BRFC165634Z	CARBON FIXED CHIP 56K 1/16W J
R98	RC002821	BRFC184744Z	CARBON FIXED CHIP 470K 1/8W J
R99	RC002821	BRFC184744Z	CARBON FIXED CHIP 470K 1/8W J
R100	RC005262	BRFC168234Z	CARBON FIXED CHIP 82K 1/16W J
R101	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R102	RC005246	BRFC162204Z	CARBON FIXED CHIP 22 1/16W J
R103	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R104	RC005286	BRFC165644Z	CARBON FIXED CHIP 560K 1/16W J
R105	RC005261	BRFC168224Z	CARBON FIXED CHIP 8.2K 1/16W J
R106	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R107	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R108	RC008028	BRFC162724Z	CARBON FIXED CHIP 2.7K 1/16W J
R109	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R110	RC008028	BRFC162724Z	CARBON FIXED CHIP 2.7K 1/16W J
R111	RC008028	BRFC162724Z	CARBON FIXED CHIP 2.7K 1/16W J
R112	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R113	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R114	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R115	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R116	RC008592	BRSJ224714Z	METAL OXIDE 470 1/2WS J
R117	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R118	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R119	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R120	RC005247	BRFC162214Z	CARBON FIXED CHIP 220 1/16W J
R121	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R122	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R123	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R124	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R125	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R126	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R127	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R128	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R129	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R130	RC004342	BRPA611044Z	CARBON 100K 1/6W J
R131	RC004345	BRPA618224Z	CARBON 8.2K 1/6W J
R132	RC004342	BRPA611044Z	CARBON 100K 1/6W J
R133	RC005261	BRFC168224Z	CARBON FIXED CHIP 8.2K 1/16W J
R134	RC005281	BRFC162224Z	CARBON FIXED CHIP 2.2K 1/16W J
R135	RC005281	BRFC162224Z	CARBON FIXED CHIP 2.2K 1/16W J
R136	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R137	RC005673	BRFC163934Z	CARBON FIXED CHIP 39K 1/16W J
R138	RC005261	BRFC168224Z	CARBON FIXED CHIP 8.2K 1/16W J
R139	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R140	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R141	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R142	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
R143	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R144	RC005261	BRFC168224Z	CARBON FIXED CHIP 8.2K 1/16W J
R145	RC005261	BRFC168224Z	CARBON FIXED CHIP 8.2K 1/16W J
R146	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R147	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R148	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R149	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R150	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R151	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R152	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R153	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R154	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R155	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R157	RC005261	BRFC168224Z	CARBON FIXED CHIP 8.2K 1/16W J
R158	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R160	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R161	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R162	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R163	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R164	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R165	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R166	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R167	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R168	RC005253	BRFC163324Z	CARBON FIXED CHIP 3.3K 1/16W J
R169	RC008028	BRFC162724Z	CARBON FIXED CHIP 2.7K 1/16W J
R170	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R171	RC005239	BRFC161014Z	CARBON FIXED CHIP 100 1/16W J
R172	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R173	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R174	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R175	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R176	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R177	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R178	RC004177	BRPA612224Z	CARBON 2.2K 1/6W J
R179	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R180	RC005279	BRFC161514Z	CARBON FIXED CHIP 150 1/16W J
R181	RC008482	BRFC186804Z	CARBON FIXED CHIP 68 1/8W J
R182	RC008482	BRFC186804Z	CARBON FIXED CHIP 68 1/8W J
R183	RC008766	BRFC161224Z	CARBON FIXED CHIP 1.2K 1/16W J
R184	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R185	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R186	RC008493	BRFC183914Z	CARBON FIXED CHIP 390 1/8W J
R188	RC008493	BRFC183914Z	CARBON FIXED CHIP 390 1/8W J
R190	RC008440	BRPA614714Z	CARBON 470 1/6W J
R191	RC005258	BRFC164744Z	CARBON FIXED CHIP 470K 1/16W J
R192	RC003225	BRFC181014Z	CARBON FIXED CHIP 100 1/8W J
R193	RC003225	BRFC181014Z	CARBON FIXED CHIP 100 1/8W J

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
R194	RC009036	BRFC181814Z	CARBON FIXED CHIP 180 1/8W J
R195	RC008493	BRFC183914Z	CARBON FIXED CHIP 390 1/8W J
R196	RC008493	BRFC183914Z	CARBON FIXED CHIP 390 1/8W J
R197	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R198	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R199	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R300	RC002802	BRFC181244Z	CARBON FIXED CHIP 120K 1/8W J
R301	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R302	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R305	RC004177	BRPA612224Z	CARBON 2.2K 1/6W J
R306	RC008482	BRFC186804Z	CARBON FIXED CHIP 68 1/8W J
R307	RC008482	BRFC186804Z	CARBON FIXED CHIP 68 1/8W J
R309	RC008480	BRFC166844Z	CARBON FIXED CHIP 680K 1/16W J
R310	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R311	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R312	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R313	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R314	RC004174	BRPA611024Z	CARBON 1K 1/6W J
R315	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R316	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R318	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R401	RC008733	BRFC161814Z	CARBON FIXED CHIP 180 1/16W J
R402	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R403	RC002613	BRFC011004Z	CARBON FIXED CHIP 10 1/10W J
R405	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R406	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R407	RC005256	BRFC164724Z	CARBON FIXED CHIP 4.7K 1/16W J
R408	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R410	RC005262	BRFC168234Z	CARBON FIXED CHIP 82K 1/16W J
R411	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R412	RC005432	BRFC161544Z	CARBON FIXED CHIP 150K 1/16W J
R413	RC008935	BRFC012294Z	CARBON FIXED CHIP 2.2 1/10W J
R414	RC008935	BRFC012294Z	CARBON FIXED CHIP 2.2 1/10W J
R415	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R416	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R417	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R418	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R419	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R422	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R423	RC005248	BRFC162234Z	CARBON FIXED CHIP 22K 1/16W J
R424	RC008306	BRFC161524Z	CARBON FIXED CHIP 1.5K 1/16W J
R425	RC005256	BRFC164724Z	CARBON FIXED CHIP 4.7K 1/16W J
R427	RC005253	BRFC163324Z	CARBON FIXED CHIP 3.3K 1/16W J
R428	RC005253	BRFC163324Z	CARBON FIXED CHIP 3.3K 1/16W J
R429	RC005253	BRFC163324Z	CARBON FIXED CHIP 3.3K 1/16W J
R430	RC005253	BRFC163324Z	CARBON FIXED CHIP 3.3K 1/16W J
R431	RC005284	BRFC163334Z	CARBON FIXED CHIP 33K 1/16W J

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
R432	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R433	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R434	RC008767	BRFC163344Z	CARBON FIXED CHIP 330K 1/16W J
R435	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R436	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R437	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R438	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R439	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R440	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R441	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R442	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R443	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R445	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R446	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R447	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R448	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R449	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R450	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R451	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R452	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R453	RC005248	BRFC162234Z	CARBON FIXED CHIP 22K 1/16W J
R454	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R455	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R456	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R457	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R458	RC005283	BRFC162734Z	CARBON FIXED CHIP 27K 1/16W J
R459	RC005260	BRFC166834Z	CARBON FIXED CHIP 68K 1/16W J
R460	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R461	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R462	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R463	RC008091	BRFC165614Z	CARBON FIXED CHIP 560 1/16W J
R464	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R465	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R466	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R467	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R468	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R469	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R470	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R471	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R472	RC008286	BRFC162744Z	CARBON FIXED CHIP 270K 1/16W J
R473	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R474	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R475	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R476	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R477	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R478	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R479	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
R480	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R481	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R482	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R484	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R485	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R486	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R487	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R488	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R490	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R492	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R493	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R494	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R495	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R496	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R497	RC002898	BRFC010004Z	CARBON FIXED CHIP 0 1/10W J
R498	RC002799	BRFC181024Z	CARBON FIXED CHIP 1K 1/8W J
R611	RC005239	BRFC161014Z	CARBON FIXED CHIP 100 1/16W J
R612	RC005239	BRFC161014Z	CARBON FIXED CHIP 100 1/16W J
R613	RC005239	BRFC161014Z	CARBON FIXED CHIP 100 1/16W J
R614	RC005281	BRFC162224Z	CARBON FIXED CHIP 2.2K 1/16W J
R616	RC005432	BRFC161544Z	CARBON FIXED CHIP 150K 1/16W J
R617	RC005252	BRFC163314Z	CARBON FIXED CHIP 330 1/16W J
R618	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R619	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R620	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R621	RC005245	BRFC161834Z	CARBON FIXED CHIP 18K 1/16W J
R622	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R623	RC005286	BRFC165644Z	CARBON FIXED CHIP 560K 1/16W J
R625	RC005259	BRFC166814Z	CARBON FIXED CHIP 680 1/16W J
R626	RC005280	BRFC161534Z	CARBON FIXED CHIP 15K 1/16W J
R627	RC005243	BRFC161054Z	CARBON FIXED CHIP 1M 1/16W J
R628	RC005311	BRFC160004Z	CARBON FIXED CHIP 0 1/16W J
R629	RC005285	BRFC165634Z	CARBON FIXED CHIP 56K 1/16W J
R631	RC005673	BRFC163934Z	CARBON FIXED CHIP 39K 1/16W J
R632	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R633	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R634	RC005251	BRFC163304Z	CARBON FIXED CHIP 33 1/16W J
R635	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R636	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R637	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R638	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R639	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R640	RC008479	BRFC161844Z	CARBON FIXED CHIP 180K 1/16W J
R641	RC005248	BRFC162234Z	CARBON FIXED CHIP 22K 1/16W J
R642	RC005245	BRFC161834Z	CARBON FIXED CHIP 18K 1/16W J
R643	RC008765	BRFC161004Z	CARBON FIXED CHIP 10 1/16W J
R644	RC008030	BRFC165624Z	CARBON FIXED CHIP 5.6K 1/16W J

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
R645	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R646	RC005288	BRFC168244Z	CARBON FIXED CHIP 820K 1/16W J
R647	RC005281	BRFC162224Z	CARBON FIXED CHIP 2.2K 1/16W J
R648	RC005284	BRFC163334Z	CARBON FIXED CHIP 33K 1/16W J
R649	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R650	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R651	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R652	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R653	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R654	RC008479	BRFC161844Z	CARBON FIXED CHIP 180K 1/16W J
R655	RC005253	BRFC163324Z	CARBON FIXED CHIP 3.3K 1/16W J
R656	RC005280	BRFC161534Z	CARBON FIXED CHIP 15K 1/16W J
R657	RC005432	BRFC161544Z	CARBON FIXED CHIP 150K 1/16W J
R658	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R659	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R660	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R666	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R667	RC005281	BRFC162224Z	CARBON FIXED CHIP 2.2K 1/16W J
R668	RC005253	BRFC163324Z	CARBON FIXED CHIP 3.3K 1/16W J
R670	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R671	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R672	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R673	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R674	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R675	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R676	RC005252	BRFC163314Z	CARBON FIXED CHIP 330 1/16W J
R677	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R678	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R679	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R680	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R681	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R682	RC005253	BRFC163324Z	CARBON FIXED CHIP 3.3K 1/16W J
R683	RC005284	BRFC163334Z	CARBON FIXED CHIP 33K 1/16W J
R684	RC005284	BRFC163334Z	CARBON FIXED CHIP 33K 1/16W J
R685	RC005280	BRFC161534Z	CARBON FIXED CHIP 15K 1/16W J
R687	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R688	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R689	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R690	RC008683	BRFC161094Z	CARBON FIXED CHIP 1 1/16W J
R691	RC008682	BRFC161033Z	CARBON FIXED CHIP 10K 1/16W F
R692	RC005239	BRFC161014Z	CARBON FIXED CHIP 100 1/16W J
R693	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R694	RC008684	BRFC165623Z	CARBON FIXED CHIP 5.6K 1/16W F
R696	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R698	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R699	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R700	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
R702	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R703	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R704	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R705	RC005286	BRFC165644Z	CARBON FIXED CHIP 560K 1/16W J
R706	RC005246	BRFC162204Z	CARBON FIXED CHIP 22 1/16W J
R707	RC005242	BRFC161044Z	CARBON FIXED CHIP 100K 1/16W J
R708	RC005285	BRFC165634Z	CARBON FIXED CHIP 56K 1/16W J
R709	RC005278	BRFC161244Z	CARBON FIXED CHIP 120K 1/16W J
R711	RC002898	BRFC010004Z	CARBON FIXED CHIP 0 1/10W J
R715	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R751	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R752	RC003371	BRFC188214Z	CARBON FIXED CHIP 820 1/8W J
R753	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R754	RC002322	BRFC014734Z	CARBON FIXED CHIP 47K 1/10W J
R755	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R756	RC008733	BRFC161814Z	CARBON FIXED CHIP 180 1/16W J
R757	RC005252	BRFC163314Z	CARBON FIXED CHIP 330 1/16W J
R758	RC005256	BRFC164724Z	CARBON FIXED CHIP 4.7K 1/16W J
R759	RC002322	BRFC014734Z	CARBON FIXED CHIP 47K 1/10W J
R760	RC002502	BRFC181044Z	CARBON FIXED CHIP 100K 1/8W J
R761	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R762	RC005285	BRFC165634Z	CARBON FIXED CHIP 56K 1/16W J
R763	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R764	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R765	RC008766	BRFC161224Z	CARBON FIXED CHIP 1.2K 1/16W J
R766	RC005260	BRFC166834Z	CARBON FIXED CHIP 68K 1/16W J
R767	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R768	RC005239	BRFC161014Z	CARBON FIXED CHIP 100 1/16W J
R769	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R770	RC005257	BRFC164734Z	CARBON FIXED CHIP 47K 1/16W J
R771	RC005248	BRFC162234Z	CARBON FIXED CHIP 22K 1/16W J
R772	RC002322	BRFC014734Z	CARBON FIXED CHIP 47K 1/10W J
R773	RC005256	BRFC164724Z	CARBON FIXED CHIP 4.7K 1/16W J
R774	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R775	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R776	RC002322	BRFC014734Z	CARBON FIXED CHIP 47K 1/10W J
R778	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R779	RC001788	BRFC181034Z	CARBON FIXED CHIP 10K 1/8W J
R782	RC008306	BRFC161524Z	CARBON FIXED CHIP 1.5K 1/16W J
R783	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R784	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R785	RC005240	BRFC161024Z	CARBON FIXED CHIP 1K 1/16W J
R786	RC008480	BRFC166844Z	CARBON FIXED CHIP 680K 1/16W J
R787	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R788	RC005241	BRFC161034Z	CARBON FIXED CHIP 10K 1/16W J
R789	RC002899	BRFC180004Z	CARBON FIXED CHIP 0 1/8W J
R791	RC005239	BRFC161014Z	CARBON FIXED CHIP 100 1/16W J

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R792	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J
R793	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J
R794	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J
R797	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J
SWITCHES				
S1	RC003604	BSWY0755001	SWITCH	SW-755 SBHA12B-06
S2	RC005118	BSWY0756001	SWITCH:SLIDE	SW-756 SBHA13B-06
S3	RC005118	BSWY0756001	SWITCH:SLIDE	SW-756 SBHA13B-06
S5	RC003604	BSWY0755001	SWITCH	SW-755 SBHA12B-06
WIRES				
W1	RC008405	CUQB009022Z	WIRE W-005	UL 1571 #26 5- 90- 5 RED
W2	RC008406	CUQK009022Z	WIRE W-005	UL 1571 #26 5- 90- 5 BLK
W3	RC008359	CUQK015033Z	WIRE W-005	UL 1571 #26 7-150- 7 BLK
W4	RC008358	CUQB015033Z	WIRE W-005	UL 1571 #26 7-150- 7 RED
W301	RC008503	CUKJ006021Z	WIRE	UL1007 #28 5-60-3 WHT
W302	RC008504	CUKK006021Z	WIRE	UL 1007 #28 5- 60- 3 BLK
W601	RC008685	CZDZ072198Z	WIRES ASSEMBLED	W-072198
W801	RC008581	CUPB007011Z	WIRE W-004	UL 1571 #26 3- 70- 3 RED
W801	RC008350	CUQJ007011Z	WIRE W-005	UL 1571 #26 3- 70- 3 WHT
W802	RC001338	CUQK007011Z	WIRE W-005	UL 1571 #26 3- 70- 3 BLK
WA901	RC008231	BWZY1401001	CORD:TEL	⚠ WZ-1401 1850 W/P
CRYSTALS				
X1	RC003629	BQXY0542001	CRYSTAL	QX-542 3.579545MHZ
X2	RC008659	BQXY0719001	CRYSTAL	QX-719 4.096MHZ
X401	RC009042	BQXY0730001	CRYSTAL	QX-730 4.096MHZ
X601	RC008681	BQXY0723001	CRYSTAL	QX-723 4.096MHZ
OTHER ELECTRICAL PARTS				
AD901	RC003328	BADY0318001	AC ADAPTOR	⚠ AD-318 H-A1-2178A
AT301	RC008310	BATY0369001	ANTENNA	⚠ AT-369 AT-36
B201	RC008697	AC618ZLBB	RF MODULE (BASE)	
B501	RC008699	AC618ZLPB	RF MODULE (HANDSET)	
BT901	RC004931	BBTY0403001	BATTERY	⚠ BT-403 GP60AAK3BMX
DP601	RC008450	BDLY0193001	LIQUID CRYSTAL DISPLAY	DL-193 NCOG068
FC301	RC009043	BWfy3081205	FLAT CABLE	WF-308 4-120-4 20P
MC1	RC004062	BMKY0475001	MICROPHONE	MK-475 WM-034BZ
MC601	RC004062	BMKY0475001	MICROPHONE	MK-475 WM-034BZ
RL1	RC000867	BRly0042001	RELAY	⚠ RL-042 OMR-108H
SP301	RC001282	BSPY0166001	SPEAKER	SP-166 C060A20G0060
SP601	RC008787	BYyy0901001	BUZZER	YY-901 CB-12AP-03
SP801	RC008336	BSPY0409001	SPEAKER	⚠ SP-409 DTR169HP-005
PACKING PARTS				
	RC008427	WSLV482644Z	AIR BAG	
	RC005198	UDZZ73535ZZ	CAUTION BELT	
	RC008249	GBCT443174Z	CLIP	PC
	RC004291	WETC420086Z	COVER:ANT.	EPE
	RC008254	WBXZ343204Z	DISPLAY BOX	
	RC008422	RETC443314Z	DOUBLE SIDED	

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
	RC004688	PLBB454286Z	LABEL:BARCODE PAPER
	RC004689	PLBB454287Z	LABEL:BARCODE PAPER
	RC008263	UCZZ01625BZ	OWNER'S MANUAL
	RC008239	UCZZ69223BZ	QUICK REFERENCE GUIDE
	RC009059	WCTZ443205Z	SHIPPING CARTON BOX
	RC008425	WSLV342836Z	SLEEVE
	RC008426	WSLV443144Z	SLEEVE
	RC008719	VNYH1103000	VINYL BAG 100x300x0.05T HIPE
	RC005455	VNYH1304000	VINYL BAG 300x400x0.05T HIPE
	RC008783	VNYL2304060	VINYL BAG 300x400x600x0.07T
	RC008353	VNYL3101000	VINYL BAG 100x100x0.1T
	RC008423	VNYL3102500	VINYL BAG 100x250x0.1T

ASSEMBLY PARTS LIST

NOTE: Following part numbers are not available as replacement parts.

Order parts necessary for repair or contact the Toshiba Factory Service Center.

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
	RC009060	AC625BLBA	BASE MAIN PCB ASSEMBLY
	RC009062	AC625BLBC	BASE KEY PCB ASSEMBLY
	RC009061	AC625BLPA	HANDSET MAIN PCB ASSEMBLY

SPECIFICATIONS

MEASUREMENT CONDITIONS

1. Standard Voltage : Portable Unit DC 3.8V \pm 0.025V
 : Base Unit AC 120V \pm 3V 60Hz

2. Temperature : 25 $^{\circ}$ C \pm 5 $^{\circ}$ C

3. Channel	CH	Portable(TX Frequency)	Base(TX Frequency)
	1	902.119024MHz	924.996683MHz
	2	902.218927MHz	925.096585MHz
	3	902.318829MHz	925.196488MHz
	4	902.418732MHz	925.296390MHz
	5	902.518634MHz	925.396293MHz
	6	902.618537MHz	925.496195MHz
	7	902.718439MHz	925.596098MHz
	8	902.818341MHz	925.696000MHz
	9	902.918244MHz	925.795902MHz
	10	903.018146MHz	925.895805MHz
	11	903.118049MHz	925.995707MHz
	12	903.217951MHz	926.095610MHz
	13	903.317854MHz	926.195512MHz
	14	903.417756MHz	926.295415MHz
	15	903.517659MHz	926.395317MHz
	16	903.617561MHz	926.495220MHz
	17	903.717463MHz	926.595122MHz
	18	903.817366MHz	926.695024MHz
	19	903.917268MHz	926.794927MHz
	20	904.017171MHz	926.894829MHz
	21	904.117073MHz	926.994732MHz
	22	904.216976MHz	927.094634MHz
	23	904.316878MHz	927.194537MHz
	24	904.416780MHz	927.294439MHz
	25	904.516683MHz	927.394341MHz
	26	904.616585MHz	927.494244MHz
	27	904.716488MHz	927.594146MHz
	28	904.816390MHz	927.694049MHz
	29	904.916293MHz	927.793951MHz
	30	905.016195MHz	927.893854MHz

4. Tel. Line Voltage/Load : DC 48V \pm 2V / 600 OHMS
 5. Ring Frequency : 20 Hz
 6. Ring Duration : 2 Sec ON, 4 Sec OFF
 7. Standard Deviation : \pm 30KHz Dev.
 8. Secure Code : 65536 Combinatin
 9. Method of Measurement : According to EIA Standard RS-316A
 10. Portable RX AF Load : 150 OHMS

BASE UNIT

RECEIVER

1. Sensitivity 12 dB SINAD	with CCITT Filter	dBm	-110	< -104
2. Frequency Response (Ref:1kHz)	0.3kHz	dB	-2.5	-6.5~+1.5
	3.0kHz	dB	-1.5	-5.5~+2.5
3. Distortion at 1 mV RF Input		%	1.5	< 5
4. S/N ratio at 1 mV RF Input	with CCITT Filter	dB	58	50 <
5. Tel Line Output Level (600W Load)		dBm	-21	-25~-17
6. Bell Ringer Level at 30cm		dB SPL	85	75 <

TRANSMITTER

1. RF Power (50W Load)		dBm	-6.0	-8.5~-3.5
2. Audio Sensitivity (at 110mV codec output)		dBm	-19.5	-24~-15
3. Frequency Response (Ref:1kHz)	0.3kHz	dB	-1.5	-5.5~+2.5
	3.0kHz	dB	3.0	-1.0~+7.0
4. Frequency Tolerance		ppm	0	-20~+20
5. Deviation		kHz	±32	±23~±46
6. Distortion		%	2.0	< 5
7. S/N Ratio	with CCITT Filter	dB	56	50 <

SPEAKERPHONE

1. Microphone Sensitivity (at TEL OUT -20dBm)	UNIT	NOMINAL	LIMIT
2. Audio Output Power (at TEL IN -30dBm)	mV	2	1.0~4.0
	mV	600	350~1050

CALLER ID

1. CID(FSK) Sensitivity (ON HOOK)	UNIT	NOMINAL	LIMIT
a. Minimum acceptable signal level with 25dB S/N ratio	dBm	-48	< -42
b. Maximum acceptable signal level with 25dB S/N ratio	dBm	0	-6 <

TELEPHONE LINE

1. Off-hook Impedance (at 1kHz)	UNIT	NOMINAL	LIMIT
2. Off-hook DC Resistance (DC 40mA)	OHM	1000	500~1500
3. On-hook Impedance 20Hz (75Vrms)	OHM	240	100~300
4. Minimum Ringer Input Level	kOHM	25	10 <
5. Pulse Dialing	Vrms	32	< 40
a. Dialing Rate (@10pps)	pps	10	8~11
b. Make Ratio (@10pps)	%	39	36~42
6. DTMF Output (@600W Load)			
a. Minimum Level of Single Tone			
Low Group	dBm	-7	-10~4
High Group	dBm	-5	-8~4
b. DTMF Level	dBm	-3	< 0
c. DTMF Frequency			
Row 1	Hz	697	687~707
Row 2	Hz	770	759~781
Row 3	Hz	852	840~864
Row 4	Hz	941	927~955
Column 1	Hz	1209	1191~1227
Column 2	Hz	1336	1316~1356
Column 3	Hz	1477	1455~1499
d. Signal Length	mSec	100	50 <
e. Interdigit Pause	mSec	100	45 <

HANDSET UNIT

RECEIVER

		UNIT	NOMINAL	LIMIT
1. Sensitivity 12 dB SINAD	with CCITT Filter	dBm	-110	< -104
2. Frequency Response (Ref:1kHz)	0.3kHz	dB	0	-4.0~+4.0
	3.0kHz	dB	-4.0	-8.0~0
	VOL. HAC	mV	155	135~175
3. Audio Output Level	VOL. HIGH	mV	90	70~110
	VOL. MEDIUM	mV	50	30~70
	VOL. LOW	mV	30	20~40
4. Distortion at 1 mV RF Input		%	1.5	< 5
5. S/N ratio at 1 mV RF Input	with CCITT Filter	dB	60	50 <
6. Ringer Level at 30cm from Speaker				
	2 TONE VOL HI	dB SPL	80	75 <
	2 TONE VOL LO	dB SPL	70	60 <
	3 TONE VOL HI	dB SPL	70	60 <
	3 TONE VOL LO	dB SPL	60	50 <

TRANSMITTER

		UNIT	NOMINAL	LIMIT
1. RF Power (50W Load)		dBm	-4.0	-6.5~-2.0
2. Audio Sensitivity		mV	3	1.5~4.5
3. Frequency Response (Ref:1kHz)	0.3kHz	dB	-3.0	-7.0~+1.0
	3.0kHz	dB	-1.5	-5.5~+2.5
4. Frequency Tolerance		ppm	0	-20~+20
5. Deviation		kHz	±32	±23~±46
6. Distortion		%	1.5	< 5
7. S/N Ratio	with CCITT Filter	dB	60	50 <

POWER CONSUMPTION

		UNIT	NOMINAL	LIMIT
1. Base Unit				
a. Stand-by Charge Off		mA	160	< 190
b. Stand-by Charge On		mA	240	210~270
c. Talk		mA	200	< 230
2. Charge Current (at BATTERY)		mA	45	30~60
3. Portable Unit				
a. Stand-by (Ring ON mode)		mA	3.0	< 4.5
b. Talk		mA	70	< 85
4. Battery Low Detect Voltage		V	3.3	3.15~3.45

OTHERS

- Battery : Ni-Cd Battery 600mAH (@1.2V×3=3.6V)
- Memory : 20 Memories (20 digits) + 3 Redial Memory (32 digits)
- Operating Temperature : -10°C ~ +50°C
- Storage Temperature : -20°C ~ +60°C

REQUIREMENTS COMPLIANCE

- Unit is designed to fully meet with UL1459 and FCC Rules, Part 15 and 68.

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